Lumleian Lectures
ON
CERTAIN POINTS IN THE ETIOLOGY OF DISEASE.

Delivered at the Royal College of Physicians on March 31st and April 5th and 7th, 1892,

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LECTURE II.

MR. PRESIDENT AND GENTLEMEN,—In my first lecture I endeavoured to open the statement that we are wrong if we seek for the cause of disease as of some monstrous and abnormal—almost illegal—interruption of our comforts and our life; that diseases are part of the vast and mysterious, though beneficent, system under which we live, that morbid processes are strictly physiological, and that the origin and conditions of diseases and of death must be sought by the same methods as the origin and conditions of health and of life. I would deal with etiology as a branch of natural history—and Historia, let us remember, signified inquiry as well as record,—to be studied in the light of comparative pathology and the great principle of evolution. I sought to direct attention from this point of view to the meaning of parasitic diseases, of injuries and irritants, of contagion, of diathetic states, congenital lesions and degeneration, and referred to the operation of such general biological laws as reaction to stimuli, habit, tolerance and immunity, heredity and degeneration.

We now come to the second division of our subject—the general etiological conditions which cause or favour diseases, not as accidents, injuries, degeneration and decay which affect individuals, but as predisposing rather than exciting causes, affecting groups of mankind, according to sex, age, and occupation, the climate they dwell in, and the race to which they belong.

Statistics.—Here we have less guidance from direct observation of cases and none at all from experiment. The conditions in question are too complex, and we have to depend almost entirely upon the method of statistics—i.e., the collocation in large numbers of instances. Here, if we would walk surely, we must walk warily, for the pitfalls are many.

Let me offer a few examples. It was said by a biographer of the great Dr Thomas Young, that although his scientific achievements far exceeded his work in his profession, yet that it was a remarkable fact that the percentage of deaths among his patients at St. George's Hospital was far lower than among those of his colleagues: doubtless the explanation was that fewer acute and interesting cases were admitted to his wards than to those who were more zealous in their calling. By the returns of the Lying-in Charity of Guy's Hospital, extending over several years, it was conclusively proved that more women were brought to bed of their second child than of their first: the inexperienced primipara did not often seek the skilled assistance which she afterwards took care to secure. If any disease is found to be as frequent in elderly people as in children, it is clear that they are not equally, but far more, liable to it, since many children do not reach old age, but every old man or woman has been a child: quite apart from incidence on one age or another, the cases of death from any disease will be less frequent late in life than early, because there are fewer to be ill of it. The superiority of the treatment of enteric fever by cold baths was once asserted on the strength of the very low mortality among patients so treated in the military hospital, Munich: but it was forgotten that with picked men of a very favourable age, free from chronic disease, well-fed and housed and nursed, any treatment would be likely to show better results than in cases taken from the population at large. Again, more male than female children come into the world; hence, for the first few years of life the proportion of deaths of boys from any indifferent accident or disease will be greater than that of girls, other things being equal: the disproportion is gradually redressed, and after fifty the number of women dying from any given disease, with no special sexual incidence, will, other things being equal, be greater than that of men.

Statistics, to be of value, must be taken without selection, designed or unintentional; they must refer to the same things—in etiological inquiries to well-defined and easily recognised diseases; they must be in sufficient number to compensate for such accidents as a "run of heads" before a "tail" appears; and they must be carefully "corrected" by such other statistics as the number of persons available for each enumeration.[1]

Etiological relations of sex.—With respect to the influence of sex in the causation of disease many interesting facts show the wide-reaching difference in physiology between men and women, exclusive of diseases directly and obviously connected with the uterus and ovaries, with menstruation, pregnancy, and lactation. (1) Some of the cases of special incidence of general diseases on women may be explained by the indirect effect of primary disorders of the female organs; (2) others by the more emotional tendency, the greater liability to disturbance and the smaller power of self-restraint shown by the majority of women compared with the majority of men; (3) some of the cases of special incidence of general diseases on men may be referred to their more exposed and hazardous life, to their different physical and mental education, to their greater liability to the results of calculus and stricture, and their more general propensity to gluttony and drink.

Under the first head comes the frequency of cancer of the breast in women. This, along with the great proclivity of the uterus to cancer, makes the total mortality from carcinoma considerably greater in women than in men.[2] To the same indirect uterine influence may be referred a certain number of cases of cardiac disease dependent on the high tension of the blood, the "physiological plethora" of pregnancy, as Dr. Barnes has termed it; a large number of cases of hydronephrosis and consecutive Bright's disease, which result from prolapse of the uterus; the majority of cases of severe anæmia with constipation; and perhaps a third of the cases of gutta rosea in women which depend upon disordered menstruation or on the menopause. Also for the rarity of gonorrhœal synovitis and the greater frequency of peritonitis in women.

Under the second head of "mental constitution" we may rank the prevalence among women of functional nervous disorders to which the adjective hysterical has (not without reason) been applied, with comparative rarity of the more fixed and permanent fancies to which (also not without reason) the title "hypochondria" has been given; the frequency of cardiac palpitation and other functional disorders of the heart, including perhaps that most singular of maladies exophthalmic goitre; and the uncertainty of both symptoms and events which attends cases of paraplegia in women.

Under the third head of "feminine habits" fall the proclivity of women to headache and neuralgia, constipation and dyspepsia (including that caused by the abuse of tea-drinking), obesity and anæmia from want of fresh air and active exercise; as well as their comparative immunity from atheromatous disease of the heart and arteries, particularly from aneurysm and from aortic (lævo-sigmoid) valvular lesions, from delirium tremens, from cirrhosis of the liver, and from gout; also from hernia, volvulus and other forms of intestinal obstruction which depend on strangulation of previously healthy gut, compared with their liability to those more chronic forms of obstruction which are caused by adhesions about the pelvic organs. The several effects above mentioned are due to the indirect working of disorders of the uterus and ovaries, the ready susceptibility of the nervous system, the comparative absence of exposure to weather and accident, of muscular labour and strain, and the diet, clothing, and habits which civilised life impose upon women. All of these have their full play during the time of ovarian activity, and are much more restricted before and after that middle period of life, in girls under puberty, and in women after the menopause. Accordingly, we do not find that the specially female maladies are nearly so common in childhood or in old age. On the other hand, we do find that men of feminine impressibility suffer from hysteria, from palpitations and syncope, or, to use our fathers' terms, young and emotional men are liable to "the vapours" and to "swoon."

[1] This is done by Dr. William Ogle in the instructive reports of the Registrar-General. The problems of statistics have been scientifically treated in Dr. Longstaff's excellent monograph on the subject.

[2] The Registrar-General's returns show that from 1848 to 1890 there were 187,734 deaths from cancer in women and only 84,913 in men.

There still remain instances of marked sexual proclivity without any plausible explanation. Male children (allowing for their greater number) are more liable than female to tubercular meningitis, laryngismus stridulus, and tetanilla. In patients of all ages, most structural diseases of the nervous system are decidedly more frequent in men than in women. I do not refer to apoplexy and hemiplegia, because, so far as these clinical diseases depend on cerebral hæmorrhage, they are not nervous, but vascular in origin; nor to tetanus, because that is an infective and traumatic disease like pyæmia. But why should cases of acute myelitis, of progressive muscular atrophy (including Cruveilhier's palsy, bulbar paralysis, and Duchenne's pseudo-hypertrophic paralysis), of tabes, of cerebral abscess and tumours, and of general paralysis of the insane be so far more common among men than among women?[3] Why, again, while the atrophic forms of paralysis are so far more common among males, is the essential acute special paralysis, which is known as distinctively children's, so impartial between the sexes?

The nervous affections in which the female sex is more or less predominant are hysteria, including hystero-epilepsy, syncope and palpitation, with some forms of emotional insanity; the eclampsia of pregnancy, and puerperal mania—all of which are etiologically related to female physiology. Megrim or sick headache and neuralgia of the fifth pair of nerve are certainly more common in women than in men, while the opposite is the case with sciatica—a hint perhaps that it is in most cases a neuritis, not a true neuralgia. Chorea is more common in girls than in boys under puberty. Thus, of first attacks under sixteen under my own care, there were thirty-four in boys to seventy in girls. If all attacks were counted the contrast was still greater. But, as we know, chorea is far more rare in grown men compared with grown women. My cases between sixteen and twenty-six are thirteen men to twenty-six women. This relative persistency of a children's malady in the female sex is an interesting point. For comparative morphology teaches that the male organism is more differentiated than the female, further removed from the embryo condition; hence, we should expect that the pathology of the adult female would approach more nearly than that of the adult male to the pathology of the child. In a somewhat similar way we may "explain"—i.e., refer to a wider group of facts—the fact that some of the diseases of women after the menopause approach nearer to those of men—as, for instance, gout.[4]

To complete the list of diseases in which the female sex operates as a powerful predisposing or favouring cause we may mention myxœdema, bronchocele (endemic and exophthalmic), gall-stones, acute yellow atrophy of the liver, floating kidney, osteo-arthritis (particularly when occurring early and affecting the fingers), mollities ossium, pemphigus, sclerodermia, and xanthelasma. Among those to which the male sex predisposes are plastic bronchitis, hay fever, asthma, angina pectoris, atheroma with aortic valvular (sigmoid) disease, aneurysm, typhlitis, invagination of the bowels (but in children only, not in adults) and strangulation generally (particularly and almost exclusively that due to the presence of a diverticulum ilii), hepatic abscess, cirrhosis, paroxysmal hæmoglobinuria, diabetes, Addison's disease of the adrenals, calculus, gout, hæmophilia, and the severer forms of anæmia, except chlorosis—viz., leuchæmia, anæmia lymphatica, and Addison's idiopathic anæmia.

Of diseases due to bacteria, parasites, and fungi, few show any etiological relation to sex; such exceptions as tetanus, glanders, and anthrax are, like lead-poisoning and grinders' phthisis, sufficiently explained by the greater exposure of men to opportunities of contracting them. But, on the whole, scarlet fever, typhus and cholera, hydatids, scabies, and ringworm are impartial in their incidence, and find equally suitable soil in either sex. One exception appears to be whooping-cough, which is either less common or less fatal among boys than among girls.

Two important diseases have been asserted to be etiologically related to sex, which are, I believe, really indifferent in this respect. One is gastric ulcer. Brinton and Wilson Fox make it more than twice as frequent in women as in men; and von Ziemssen's numbers (confirmed by necropsy) were thirty-five to fifteen. That the usually simple, punched-out, perforating ulcer of the stomach—first described by Abercrombie, and subsequently by Cruveilhier and Rokitansky—is very common amongst young women there is no doubt, but it is far from being rare in the male sex and in later periods of life. I was first struck with this among private cases, for I have seen the disease in an old gentleman aged seventy-eight, who recovered, and in a lady over seventy, who died; on the whole, more often in young men than in young women. Thinking this was an accident of too small a number of instances, I found (with the help of M. Keiffenheim) the following results: Of 93 cases in Guy's Hospital which were diagnosed as gastric ulcer and went out relieved or cured, 33 were men and 60 women; but of 101 cases which died in hospital 59 were men and only 42 women. This may mean that our diagnosis has suffered from an insufficient basis of morbid anatomy, or it may show that more women than men recover.

The other is the idiopathic form of anæmia which was fully described by Addison in 1885, recognised by English writers and by Trousseau, imperfectly described by Lebert in 1858, and rediscovered and renamed in 1871 by Biermer. This physician working at Zurich, Immermann at Basle, Quincke at Berne (as well as Lebert at Zurich), agreed in stating that what they called "progressive pernicious anæmia" was far more common in women than in men; and the statement was naturally confirmed by Professor Gusserow from a gynæcological point of view. A study of their cases, and of those collected by Eichhorst in his monograph on anæmia, shows that some of them would in England be called chlorosis, and others would be regarded as anæmia secondary to hard and scanty fare, gastric disturbance, diarrhœa, hæmorrhagia, or lactation. On this principle we might add cases of "pernicious" anæmia in both sexes due to cardiac or renal disease, plumbism, or cancer, and, as a matter of fact, such cases have been admitted by certain writers. The important fact discovered by Addison has thus been lost sight of: that there is a severe and fatal form of anæmia which is idiopathic, primary, essential. If we exclude the secondary and spurious cases, and keep to his original and masterly account of the disease, we shall find that it is as common among men as women. And this agrees with its true pathology—for it is quite distinct from chlorosis, and is naturally allied with the other essential and grave forms of bloodlessness which we know as leuchæmia and Hodgkin's disease, all of which are more common in the male than the female sex; all of which, I may add, are unbenefited by steel, but sometimes cured and often relieved by arsenic.

Age in its bearing on etiology.—The predisposition of certain ages to certain diseases is often very remarkable. In some respects childhood and second childhood agree; their liability to death from bronchitis and diarrhœa argues a less power of resistance, which is also seen in the difficulty of maintaining animal heat in both extremes of life. The easy vomiting of children may be classed with the preponderance of reflex action, the spinal system being active and sensitive. Hence the prompt and marked character of the superficial reflexes (plantar, palmar, or cremasteric) in children, their ready laughter when tickled, their liability to convulsions. With the same physiological condition we may associate the presence of tetanilla and carpopedal contractions, trismus and laryngismus stridulus, infantile convulsions, and particularly those which take the place of rigor in an adult. To the same activity of reflex action we may perhaps ascribe the remarkable frequency of invagination of the intestines in children and the spasmodic element of diphtheria and catarrhal laryngitis, as well as of true asthma. Children are dependent for their food on others, and hence are liable to suffer from an insufficient or ill-constructed dietary. This is probably the cause of rickets and also of infantile diarrhœa and choleraic diarrhœa, so-called dysentery, and marasmus. The peculiar liability of children to certain forms of atrophic—including pseudo-hypertrophic—spinal paralysis has not, I believe, received any explanation. The predominance of children among those suffering from epidemic specific fevers is, no doubt, due to most adults being protected by a previous attack; for when small-pox or measles invades a virgin population all ages are indiscriminately seized.

One common character of children's diseases is that they are generalised in distribution. Tubercle invades a greater number of organs, phthisis is less confined to the apices,

[3] Traumatism cannot explain the preponderance of male patients with cerebral tumour, since Dr. Hale White has found that the same preponderance applies to male children and to tubercular growths.—*Guy's Hospital Reports*, vol. xliii., p. 118.

[4] Hipp. Aphor., vii., 29.

pericarditis and endocarditis are more constantly associated, and diseases of the skin keep far less definitely to their usual localities, as, for instance, psoriasis and scabies. This peculiarity may perhaps be referred to the greater differentiation of the tissues in an adult.

Race and climate.—The effects of climate as an element in the causation of diseases are doubtless important, interesting, and instructive. But exact accounts of endemic diseases and of local modifications of diseases are still rare. I could give no facts of value from personal knowledge, and therefore prefer to pass over this part of my subject.[5] One of the difficulties of geographical pathology lies in separating the effects of climate from those of race and manner of living. That the marked racial differences between, for example, Europeans, negroes, and Chinese affect their functions as well as their mental character, and their reaction to disease as well as their normal physiology, there can be little doubt. But on the whole it seems probable that even in such extreme cases the differences are but small. The surprising lack of sensibility to pain which is characteristic of many races is rather due to undeveloped mental qualities than to ethnological peculiarity. Negroes are said to be very little subject to malaria; but a statement which I made to this effect has been corrected by those who speak with the authority of personal experience. Nevertheless, they must be less liable than Europeans, or how do they live where white men die? At present we may, I believe, state that there is no infection against which any race of mankind is immune; that there is no disease peculiar to any nation, or from which any nation is exempt; and that there is no drug known, whether poisonous or medicinal, which fails to exert its ordinary physiological effects upon any community of mankind.

Among the few exceptions to the uniformity of geographical distribution which we observe in our own islands may be mentioned the frequency of osteo-arthritis in Ireland, the rarity of hydatids and the comparative frequency of favus in Scotland, the absence of malarial diseases in Ireland, the prevalence of urinary calculus in Norfolk, and of endemic bronchocele in Derbyshire. Mr. Cadge finds that the frequency of stone is limited to uric-acid calculi. Those of oxalate of lime are not more common, perhaps less common, than elsewhere. It is remarkable that these uric-acid calculi, though common in boys, are only so in hospital practice. A late eminent lithotomist is said to have remarked, with a sigh, that he only once received a fee for cutting a child for stone.

Has change of climate within historical times brought about change of diseases? I think we may assert that, with a few important exceptions, such as the draining which has led to the general disappearance of malaria, and the improved habitations of the poor, which have made plague unknown and typhus rare, no such changes have taken place; and in particular that there is no foundation for the opinion that in former time the English spring was milder than at present. "The uncertain glory of an April day" was as uncertain at the close of the sixteenth as at the close of the nineteenth century. In the seventeenth the great Earl of Verulam met his death from standing in the snow on Highgate Hill on Easter Monday, and Evelyn remarks, under date March 27th, 1681: "An extraordinary sharp cold spring, not yet a leaf on the trees." In the eighteenth century Horace Walpole writes that "the spring has set in with its usual severity"; and the contrast between poetical description of the "ethereal mildness of spring" and its actual inclemency had become a commonplace of satire.

Occupation.—The importance of certain trades as causes of disease is well known; so well that there is little room for discussion. The effect of lead poisoning as a predisposing cause of gout and Bright's disease, and a direct cause of colic, paralysis, and abortion, has been dealt with from extensive personal knowledge by our late Goulstonian lecturer, Dr. Thomas Oliver. Mercurial tremors are rarely seen now; we had the first case I have seen for twenty years in Guy's Hospital last November. We can often cure and prevent chronic diarrhœa and other disorders which arise from arsenical poisoning by detecting their origin. The group of conditions which have been conveniently named in common "pneumoconiosis" will engage our attention as powerful predisposing causes of phthisis.

Overwork.—Before leaving this part of my subject, however, we must ask whether laborious occupations in themselves may lead to premature strain of the body or mind, and so to degeneration and disease. Here, I think, we must distinguish. Aneurysm, emphysema, and some forms of cardiac hypertrophy undoubtedly may be the result of overstrained and too violent or prolonged exertion, from mechanical stretching of the great arteries by movements of the arms, from high blood pressure, excessive calls on the heart, and over-long suspension of respiration, as in muscular efforts with a closed glottis. We see similar results in horses which are put to hard work at too early an age, and there is no reason to doubt the operation of such causes of disease in man. But their operation is limited to the production of certain definite lesions, and there is no evidence that harm is done, disease brought on, or life shortened by what is commonly known as work, whether mental, physical, or a combination of the two. The vanity of human nature is tickled by ascribing its disorders to such respectable antecedents as industry, energy, and intellectual activity. We must all have felt this when the obvious results of habitual idleness or gluttony are ascribed by a patient or his wife to an overtaxed brain or too strenuous devotion to business—especially in the public service. There is no fear of any one of us using our brains too much for our health, nor do I believe that mental labour or honest work of any kind interferes with health or shortens life a day. Even if it did, who would not rather be worn in use than rust in idleness? Who would not choose a short-spanned life filled full of action and of thought, of sorrow and of joy, of effort and endurance, of enjoyment of living oneself, and helpful service to others, rather than to wear out a tedious existence of monotonous ease.

There is, I repeat, no reason to believe that work in itself is injurious, even if it encroach on the hours of sleep. Nature will take care of herself, and irrepressible drowsiness will bring the needed rest if it be not driven away by artificial means. The evil results of excitement in the gambler, or of anxiety in the man who habitually lives beyond his means, are indirect. Such patients go too long without food, and then eat more than they can digest, for their meals are irregular and hurried; or they take stimulants from time to time to excite them for the moment, or sedatives to give the repose which they have not fairly earned.

Before passing from this part of my subject, permit me a word of protest against the assumption, which has become a commonplace of newspapers and of conversation, that the present age, the close of this nineteenth century, is fuller than any other of what is called "worry" and anxiety, mental excitement, over-strung nerves, and what not. It is gravely asserted that railways and telegraphs and the modern race for success are shortening life in Europe generally, and in England and America in particular; that there is an enormous increase of what are called nervous disorders; and that the neurotic temperament or type or diathesis which now prevails is intolerant of the heroic means of combating diseases which were well borne by such dull-witted fellows as Steele or Johnson, and by the comfortable, prosaic, easy-living men who saw the mutiny of the Nore and Napoleon's army gathered to invade our shores. Surely we are complimenting and pitying ourselves without cause. What are the hardships of a railway journey to Bristol or to Edinburgh compared with those of a journey by coach? What are the trivial anxieties of a citizen's life from telephones and telegrams, rates and taxes, advertising druggists, and School Board elections, compared with those of previous generations, when few men had not been robbed on the highway or otherwise put in personal peril, and when the citizens of many towns in the king's dominions had experienced a siege, a famine, or a pestilence. We may be sure that family troubles, misunderstandings and quarrels, disappointments and annoyances, bodily aches and pains, bills that cannot be paid, and accounts that will not balance, were just as common a hundred years ago as now—in the days of Horace or of Lucian, as in those of the *Spectator* and the *Rambler*.[6]

[5] I cannot but refer in this connexion to the valuable reports from the medical officers living in the Chinese ports which have been drawn up and published by the wise forethought of Sir Robert Hart.

[6] That life is in every way easier than it was a little reflection will convince us, and perhaps there is no better illustration of the fact than to contrast the annoyance, cold, and vexation which must have been constantly endured while trying to strike a light with a tinder box, compared with the ease, certainty, and rapidity of the lucifer match, or the still more rapid, easy and brilliant electric light. Let me recommend the perusal of a somewhat prolix, but not uninteresting book, which obtained the honour of a review in the *Edinburgh Review*, by Sir Walter Scott, called "The Miseries of Life." It was published in 1806

The complaints we now hear were just as common fifty or a hundred years ago; the nation has been going to ruin ever since it was a nation, the present generation has always been degenerate, more feeble, more vicious, and more diseased than any which preceded it; but at the same time more sensitive, more interesting, more pitiable than any other, and, above all, gifted amid the general decay with a few superior intellects which could appreciate and describe the evils which they never attempted to cure. Hypnotism is not a more silly business than clairvoyance, nor that than mesmerism and phrenology, and the worst performances at Salpêtrière are only reproductions of mediæval cases of possession. If we may judge from plays and novels, fainting and the vapours are much less common in the nineteenth than in the eighteenth century. Men in general probably live a more domestic, healthful, and sober life than a hundred years ago; women are probably less nervous and bear and rear larger families; while children, both rich and poor, are certainly better clothed, better fed, and grow up into taller, stronger, and healthier men and women.

Local conditions as etiological factors.—When morbid anatomy was first studied by Rokitansky and his contemporaries, it was natural to make a list of all the known morbid processes, and then to apply them to each of the organs and tissues, so that one would have to describe hypertrophy and atrophy, fatty, calcareous, and pigmental degeneration, inflammation, fibroma, enchondroma, and carcinoma, malformations, and the presence of animal or vegetable parasites for every organ and tissue alike—for the parotid gland and the crystalline lens, for muscular and for adipose tissue. Such a preliminary method was valuable from its thoroughness; but long before the complete schedule was applied to every organ, it was clear that the various morbid lesions are *not* indiscriminately distributed over the body. Each general process is modified by the tissue affected, some organs are prone to certain forms of disease and are absolutely free from others, and in almost every case the common type appears under different local forms. Thus, speaking generally, we may affirm that some organs, like the small intestine, the salivary glands, and the pancreas, are almost exempt from disease, except by such specific processes as enteric fever, or tubercular ulceration, or mumps. We may state that suppurative inflammation never befalls the brain, the lungs, the liver, the spleen, the kidneys, or the testes—in fact, any of the solid viscera—except from infection or local injury; while, on the contrary, suppuration is a frequent and easy event in the case of skin, mucous membranes, connective tissue, and bone. We may affirm that tubercular inflammation, while extremely apt to affect the lymphatic tissue of bones, the lymph follicles of the intestine, and the lymph glands, as a primary process, is never seen in the great mass of lymphatic tissue formed by the spleen except by secondary infection; while, on the contrary, primary tubercle is common in the brain, the testis, and adrenal body, where lymphatic tissue is almost absent. With respect to tumours, I remember as a student supposing that chondroma, fibroma, lipoma, and the rest were just as common in one place as another, and was surprised to find that all the fatty tumours I saw were under the skin, and all the enchondromata connected with bone. It was then, strangely enough, not suspected that carcinoma had any special laws of distribution. This was partly because histologists had not yet definitely separated true carcinoma from other forms of malignant disease; at present we all, I suppose, accept Waldeyer's doctrine that "true" carcinoma only begins in an epithelial surface. This, however, is not all, for the epithelial or keratoid form has its own seats of predilection, distinct from the other kinds of cancer, and the same applies to the colloid and adenoid varieties. But the localisation of cancer is not only histological; for the mucous membrane of the small intestine, though of the same general structure as that of the rectum, is one of the rarest, as the latter is one of the most frequent, seats of the disease, and the acini of the parotid are as distinguished by their immunity as from those of the mamma by their proclivity to cancer. In the etiology of this disease it is not surely without meaning that its favourite seats, irrespective of histological structure, are the lips, tongue and throat, the œsophagus, pylorus, and rectum, the places where there is most friction.

Another remarkable law in the distribution of cancer is that those organs, as the uterus, the mamma, the stomach, the rectum, and the testis, which are the most frequent seats of primary carcinoma, rarely become affected by secondary growths; while the liver, the lungs, the lymph glands, and the serous membranes, while constantly affected by secondary, are rarely the seat of primary cancer. This proves, surely, that secondary growths are not the result of a general dyscrasia or predisposition, but are strictly derived from primary, by direct transmission through veins and lymphatics; and that primary cancer is really homologous, and not heterologous, in its origin, autochthonous and not immigrant.

In the lungs, again, phthisis chooses the apices, and not only the apices, but the highest point of the inferior lobe; while pneumonia almost as constantly begins below and spreads upwards. But it is in the skin that we find this principle of local predilection most strikingly exemplified, because here the histological characters are essentially the same. We may no doubt explain certain peculiarities as due to the greater abundance of sweat glands, or sebaceous secretion, or to the size and length of the hair, or to exposure to cold or to friction. But there remain many topographical peculiarities which are at present inexplicable. The striking and opposite localisation of psoriasis and eczema, the scarcely less marked local distribution of erythema, of lupus, of lichen ruber, of erythematous lupus, of xanthelasma, and many other cutaneous diseases, depends upon etiological laws of which at present we have no conception. All we can say is that psoriasis, for instance, affects the left elbow because it is most like the right, and affects both knees because they are most like the elbows.

The mysterious etiological factor symmetry, of which so much has been written, may be reduced to two cases. In one the same affection is seen on both palms, on both soles, over both olecrana, or both popliteal spaces, because the corresponding sides of the body resemble each other more closely than anything else in nature. Thus psoriasis is symmetrical because it affects the same kind of skin, and because there is a right and left elbow, in the same way as Bright's disease and phthisis are symmetrical because they affect renal and pulmonary tissue respectively. The other case of symmetry in which a disease affects the surface of the whole body has sometimes been held to prove that the disease is "constitutional," or has its origin in the blood or nervous system. But surely this symmetry is not of genuine etiological moment at all, it is merely the result of widespread disturbances affecting a symmetrical organism, and such accidental bilateral symmetry would be lost in the case of a man with a distorted spine—it would be asymmetry in a turbot or a snail, and pentagonal symmetry in a starfish.

We shall find many illustrations of local modifications of general morbid processes in discussing the etiology of certain particular diseases to which I shall invite your attention at my next lecture.

CERTAIN QUESTIONS ON THE TREATMENT OF DIABETES.[1]

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THE questions which I propose submitting for consideration are—1. In cases of confirmed[2] diabetes running a protracted course, may any relaxations from the usual dietetic restrictions be permitted? 2. In such cases, at what period of the disease should opium or its derivatives be commenced, and how far may they be pushed? Besides these, I had in view a third—viz., What other measures, in addition to diet and opium, have been found useful in checking the disease or in relieving special symptoms? But on consideration, when I came to write this paper, I found that the addition of this third question would make the communication too lengthy; besides which, I thought it would distract discussion from the other two, which are, to my mind, the most important. At first sight, it may be thought that these questions are superfluous, especially in this country, where the insistance on the maintenance of a rigid dietary, combined with the administration of opium or its derivatives, has been taught in our

[1] Paper read before the Medical Society of London, March 14th, 1892.
[2] Cases of transient and gouty glycosuria and intermittent forms of diabetes in which assimilation is for a time restored are not considered in this paper.

schools and endorsed in our text-books. But of late views have sprung up which have had a tendency to impair this teaching, especially as regards the necessity for maintaining a strict adherence to a proteid diet as the essential point in the treatment of the disease. This laxity with respect to a canon law first originated, no doubt, with the introduction of the so-called "skim-milk cure," and as at that time the distinction between diabetes and transient glycosuria was not clearly defined, several cases of the latter were cured which were supposed to have been of the nature of true diabetes; and though Dr. Pavy promptly disclosed the fallacy, and again placed the ban against milk in confirmed cases of diabetes, still there has remained a leaven of the heresy among many practitioners, not merely in not excluding milk from the dietary, but even in ordering it in very considerable amounts. But milk is not the only article that has crept in unawares into the fold of a pure dietary, and many of the continental physicians now permit a dietary which can no longer be called restricted. Thus Dr. Seeger[3] permits a small quantity of wheaten bread and subacid fruits, such as strawberries, &c.; Dr. Colquard[4] and Dr. Dujardin-Beaumetz[5] allow mashed potatoes instead of gluten bread; whilst in America, in a well-known work on Practical Medicine,[6] the diet table drawn up by Dr. Austin Flint[7] permits of asparagus, gooseberries, cherries, plums, and strawberries. It is true, no doubt, that those who permit these relaxations do not question the theoretic considerations on which the absolute restricted dietary is founded; they only deny the possibility of carrying it out to its full extent, and point out the direction in which relaxation may be least harmful to the patient. The point, therefore, I would draw attention to is whether such relaxation should be forbidden as aggravating the disease, or forced on us as a compromise.

With regard to the second question but little information exists; for though the authorities on this subject are eloquent on the effects opium and its derivatives have on the course of the disease, few, if any, rules are given for guidance.

The answers to these questions will of course greatly depend upon our clinical experience, and the views we have formed as to the nature and progress of the cases that have come under our observation. Most authorities now recognise two forms of confirmed diabetes, which they classify as—(1) neurogenic, usually coming on suddenly as the result of some nervous shock, and running a more or less acute course; (2) constitutional, gradually supervening as the result of some taint—gouty, rheumatic, syphilitic, or tubercular—the progress of which is usually protracted. But of late I have accepted a distinction between the two forms which I think indicates more closely their relationship and better represents their clinical features than the above-mentioned classification, which is based only on etiological conditions, and which I would describe as: 1. An alimentary diabetes, which can at first be entirely controlled by diet; but gradually this control is lost, and sugar reappears in the urine in spite of all restriction. This form is most commonly associated with a constitutional taint of some kind, though it sometimes, but less frequently, is found in cases of neurogenic origin. 2. General diabetes, in which, from the earliest onset, a restricted diet fails to remove entirely the sugar from the urine, whilst the glycosuria is out of all proportion to the food (of all kinds) ingested. This form is common in cases of neurogenic origin, and is specially characteristic of pancreatic diabetes. Whence comes the sugar in urine which is not derived from the starchy and saccharine materials of the food has always been a problem. That it is not altogether furnished by the metabolism of the proteid elements of the food—which was formerly supposed—is shown by the fact that it is often in considerable excess of what could be furnished by the proteid diet the patient was on; besides, as I have observed in carefully dieted cases, hardly any reduction, certainly not at all proportionately, follows a diminution of the proteid food—a fact which points to the source of the supply being from the tissues themselves; and, indeed, we now know that other tissues besides the hepatic furnish glycogen. What, then, happens in the two forms of diabetes we are considering is that in the milder and alimentary form the power of assimilating starch and sugar is only lost as far as the liver is concerned; but after a time, perhaps from the passage of sugar from the liver into the circulation, the tissues lose the power of transforming glycogen into energy or storing it up as fat, or, as some are now endeavouring to show, the blood loses its glycolytic or sugar-destroying power, owing to the absence of a ferment which is said to be normally furnished chiefly by the pancreas, but also by other glands. It is then that the diabetes may be said to become general. Out of a total of sugar excreted by the urine, a portion still remains removable by abstinence from starchy and saccharine food, but as the case progresses the proportion between this removable sugar and that which is not affected by a strict diet becomes more and more marked. Thus in a mild case in an early stage the total amount of sugar passed in the twenty-four hours was 150 grammes, which on strict diet sank to 30 grammes, or 5 to 1; whereas, in a severe case, one month before death the total amount of sugar was 320 grammes on a mixed diet, which was reduced by strict diet 190 grammes, or a proportion of 1 to 1·6. In short, the difference between the removable and non-removable sugar in a case of diabetes is one of considerable value for the purpose of prognosis, for any sudden increase in the proportion of the latter, though there may not be any actual increase in the total of sugar excreted, is always indicative of an exacerbation of the disease.

Rollo was the first to point out the extreme susceptibility of cases of diabetes, in which the sugar excretion had been stopped by diet, to relapse on very slight and very inadequate resumption of sugar. "Thus, half a biscuit, such as sold by confectioners at three a penny, has," he says, "brought back the disorder in full force," and my own observations have convinced me of the fact that in alimentary diabetes any increase of sugar ingested is always followed by an excretion of sugar, often above that amount. On the other hand, in general diabetes, although it is manifest the assimilative processes are lowered by the persistent presence of sugar in the blood, still the proportionate effect on the excretion of sugar is not so marked as in the purely alimentary form. Thus in a case in which the proportion of removable sugar was as 5 to 1 of non-removable, the resumption of mixed diet caused an immediate increase of the total sugar, amounting to 80 per cent.; whilst in a case in which the proportion of removable sugar was as 1 to 2 of non-removable, the resumption of the same dietary only caused a rise of 27 per cent. At first this would seem to tell in favour of a partial toleration of a less restricted diet in protracted cases of diabetes, especially when the proportion of non-removable sugar is high; but further observations show that though the increase per cent. in the amount of sugar in these cases is not so large as in the alimentary ones, still the resumption of saccharine food, even in a limited extent, acts adversely against the assimilative processes in the body, as is shown by the fact that generally when strict diet is again resumed, we find the proportion between the sugar removable by diet to be decreased; whereas the non-removable sugar is found to be increased. Thus, for instance, when before the resumption of a mixed diet the proportion of removable sugar was 3 to 1·5 of non-removable, after three weeks of mixed diet, on the return to an absolutely restricted diet the proportion became 2 to 2·5, showing that persistent supply of saccharine food had further lowered the assimilative processes in the body. This fact, therefore, seems to tell conclusively against any relaxation of the restricted dietary in this form of diabetes; whilst the extreme sensitiveness to the minutest particle of starch and saccharine food exhibited when the glycosuria is still controlled by absolute restriction of the diet tells equally against its resumption in this stage of the disorder.

The next consideration is whether the advantages gained by a strict adherence to an absolute diet of proteid substances by diminishing the amount of sugar in the blood, and so checking the tendency to a further lowering of the assimilative processes in the body and controlling the extreme diuresis, may not be gained at too great an expense to the patient's well-being, and that some benefit may be derived in other directions by permitting a slight relaxation from too rigid a proteid dietary, and whether its too long continuance is not in itself a danger by causing the formation in excess of bodies such as the

[3] International Medical Congress, Berlin, 1890; vide report in THE LANCET, Sept. 15th, 1890.
[4] L'Union Médicale, Nov. 20th, 1886.
[5] Bull. Gén. de Thérap., 1886, cxi., p. 385.
[6] Pepper's System of Practical Medicine, vol. ii., art. Diabetes, 1885.
[7] New York Medical Journal, May 24th, 1884.

morbid products of proteid metabolism. This is a question that requires further investigation before a decision can be given, but there are certain facts already ascertained which certainly seem to point in that direction. Dr. Wright, in his Grocers' Research Scholarship lecture,[8] stated that in the artificially induced diabetes of an animal kept entirely without food the same morbid products of proteid metabolism were found in the urine as are found in human diabetes, which, as the animal was in a state of inanition, must have been furnished by the imperfect metabolism of its proteid tissues. To this it may be answered that certain tribes live almost exclusively on meat from year's end to year's end; as do hunters for very long periods at a time without appearing to be in any way injuriously affected by diet. But the powers of assimilation of healthy active savages or vigorous hunters is very different from the feeble diabetic. In scurvy—a disease as I have endeavoured to show brought about by the withdrawal of alkaline salts and the increase of acid salts—so long as the patient remains vigorous, active, and cheerful, the disease is kept at bay; but the moment the vital powers are lowered from exposure, fatigue, or anxiety, then all the consequences of the diminished alkalinity of his blood are experienced. So in diabetes, though there is no actual withdrawal of the alkaline salts, there is with the flesh diet a positive entrance of an increased amount of acid salts into the body. These possibly at an early period of the disease, whilst the patient is still fairly vigorous, are eliminated by the kidneys, but when the bodily powers begin to fail they accumulate to a dangerous extent. Added to this is the fact that with increased feebleness the power of digesting proteid material is lessened, and consequently the risk of the formation of toxic bodies in the intestine is increased.

(To be concluded.)

THE INFLUENCE OF MENTAL DISTURBANCE IN PRODUCING ORGANIC DISEASE.[1]

BY H. GRABHAM LYS, M.D. LOND.

IN the following paper on the influence of mental disturbance in producing disease, I intend to limit myself almost entirely to what I think may fairly be termed "organic disease"—disease in which there is some profound change of nutrition or persistent perversion of function. The influence of mind on body in its widest application is far too extensive a subject to deal with in one article, and although from many points of view it would be advantageous to dwell upon functional derangement from mental disturbance before entering upon the genesis of more profound disease, I shall avoid it except in so far as it exemplifies this proposition, that functional derangement is a frequent antecedent of organic disease. I hope that I shall make evident the truth of this in more than one instance. The limitation that I have chosen has the advantage that it deals only with that form of disease which we are all of us, in our hospital life more especially, learning of. It will follow, too, that if I awaken interest in the dependence of organic disease on mental influence, the source of minor diseases will be readily appreciated and the lesson in therapeutics none the less impressed. In most of the cases where disease has long been known to have a definite relation to mental disturbance no effort seems to have been made to trace the links in pathology intermediate between the cause and effect. I shall endeavour to trace to mental causes, through the medium of increased arterial tension, certain cardiac and arterial degenerations which, so far as I know, have not been so referred. Beyond this class I fear I shall be able to do little but emphasise more or less well-known facts.

Atheroma.—First, then, I will deal with atheroma. Atheroma has been universally referred to increased arterial tension; and the causes of increased tension have been enumerated as Bright's disease and the arterio-capillary fibrosis, or muscular hypertrophy of arterioles, associated therewith; and second, intermittent bodily exertion. It is doubtful whether syphilis acts as a cause, unless by syphilitic arteritis and fibroid induration of viscera obstructing the circulation. In old age it may, of course, exist in proportion with the wearing out of the rest of the body without indicating excessive strain or pathological significance. Now, while there can be no doubt that intermittent exertion throws a great strain on the arterial system and leads to atheroma, I think that no long experience is required to convince one that many cases are referable neither to Bright's disease nor bodily exertion. And it seems to me strange that mental influences have not found a place here; it has long been known, and perhaps more recognised a generation ago, before physical examination became so refined, that not only temporary vaso-motor changes, such as occur in blushing or in the whiteness of rage, might be due to emotion, but also that persistent or repeated high tension often resulted from anxiety or mental distress, and accompanied a definite train of symptoms. Dr. Clifford Allbutt mentions the case of a young man whose pulse tracing during twelve months' domestic anxiety showed, on comparison with that before and after, a marked and persistent increase of tension. I have been at considerable pains to obtain some graphic illustration of this fact; but sphygmograms at all times require practice in taking and experience in interpreting, and it is not easy at will to produce such states of emotion as would afford a fair test. When one finds high tension in a patient suffering from anxiety, it is not often that we have any tracing of the pulse before the mental disturbance. The finger, however, will not fail to make the fact evident to anyone who studies the indications of the pulse and chooses to make trial of the fact. I need, indeed, hardly go beyond broad clinical experience to bear out this thesis; why so often does a person fall into a fit of apoplexy or an aneurysm rupture on some sudden mental disturbance? Can it be other than an increase of arterial tension? I shall refer also presently to the pathology of angina pectoris. Case upon case might be quoted where there has been an entire absence of history of such bodily exertion as does give rise to atheroma, where even microscopical examination has shown an entire absence of any thickening of the arterioles, and where history of the mental characteristics has shown that this was the source from which the body had been put to strain; and if atheroma is acknowledged to be due to mental disturbance, then also the results of the arterial disease—such as aneurysm and cerebral hæmorrhage—must be referred to it.

Dilated heart.—Like atheroma, primary dilatation of the left ventricle owns Bright's disease and intermittent severe exertion as its chief causes, but like atheroma it can often be traced to neither; more often than atheroma it is a senile change, and it has been attempted to refer it to degenerative changes in the heart muscle in these cases, perhaps, more than to capillary resistance. But sometimes cases occur in younger people, in whom there is no reason to assume a failure of general nutrition prior to the heart failure, and in whom it seems unreasonable to assume cardiac muscle degeneration; in these, again, I believe the cause is to be found in frequently repeated mental disturbance increasing arterial tension. It seems to be that, as in many analogous instances, the increased tension tends to persist in the interval and become habit, and so the arterial tension becomes permanently raised. But there are yet other cases of dilatation of the left ventricle traceable to mental causes apparently not through the medium of increased arterial tension—cases of a functional derangement, palpitation gradually passing into definite organic disease, hypertrophy and dilatation. How such an effect depends upon the cause is not altogether clear. I think it is perfectly evident that there does occur a class of cases in which palpitation is the primary condition and is followed by hypertrophy and dilatation, and the only question that seems to me to arise is whether increased frequency of heart does give rise in such cases to increased tension. So far as I have had opportunity of clinical observation I am convinced that in such cases there is no rise of tension; both in Graves' disease and transient palpitation the pulse tension is definitely not raised; I think it will be found that with palpitation due to emotion goes vaso-motor dilatation—blushing; and, *vice versâ*, that such emotions as cause vaso-motor constriction and increased tension are not accompanied by palpitation. And I think that these facts are borne out by physiological teaching. "The rate of the heart beat," says Foster, "is in inverse ratio to the arterial pressure, a rise of pressure being accompanied by a diminution, and a fall of pressure with increase, of pulse

[8] See THE LANCET of Feb. 27th and March 5th, 1892.

[1] A paper read before the London Hospital Medical Society in December, 1888.

rate." There is, I understand, a mechanism regulating matters on this principle. One can only suppose, then, that the nutrition of the cardiac muscle is so much interfered with by persistent excessive frequency of action that it yields beneath the normal intra-cardiac pressure. Of course, palpitation due to mental or other causes is usually, like the cause, transitory, and leads to no impairment. The cases which bear out this sequence of events are exophthalmic goitre and persistent palpitation not associated with the other symptoms of this disease: in both hypertrophy and dilatation often become developed. And also cases occurring in the American Civil War and in the British army. The former are reported by Da Costa under the term "irritable heart." He brings forward 300 cases of palpitation in soldiers called from civil pursuits without previous training to active service. In twenty-eight cases out of 100 hypertrophy and dilatation were believed to have been developed. It seems clear that the cases did not occur, even chiefly, in those who had been subjected to hard service, and that they were referable to mere change of habit with which mental influences must have been mixed up. In the British army more stress has been laid upon the prevalence of cardiac dilatation and hypertrophy than upon their antecedents; but it seems clear that the "setting-up" drill is the main factor in inducing it. This drill involves marching, and even doubling, with the chest artificially expanded, so that both inspiration and expiration must be shallow, and it is imposed upon recruits for four hours daily. It is easy to see that this might cause increased tension in the pulmonary circulation, but such would not be the result, I think, in the systemic arterial system. It has been directly observed that during the drill the heart's frequency is increased to about 110, and the respiration to 40, per minute. It may be presumed that the increased heart frequency is here due to the action of deficiently aerated blood on the brain.

Angina pectoris.—I must now return to consider the connexion between angina pectoris and mental disturbance; nothing has been more clearly established by clinical experience than dependence of paroxysms of angina upon rise of arterial tension, confirmed by the brilliant therapeutical success of nitrite of amyl which Dr. Brunton's sphygmographic observations led him to suggest. The exciting causes of angina had long been known in the majority of instances to be physical exertion or emotional excitement, and one would have thought that Dr. Brunton's discovery in 1867 would have naturally led to the increased tension being referred directly to the existing cause; but the almost invariable association of certain organic changes, such as atheroma of the aorta, aneurysm of the base of the aorta, calcification of the coronary arteries, or degenerative lesions of the cardiac nerves and ganglia, seems to have led to a rivalry of the authorities in proving that one or other of these conditions is the essential cause. To me it seems but rational to attribute most of these associated changes—the result of arterial strain—to the repeated occurrence of the same increased tension which finally, in its sudden repetition, produces the struggle of the heart for life, and which constitutes an attack of angina pectoris. The changes in the cardiac nerves and the anglia seem to be secondary to the thickening and induration of the adjacent aorta. It is true that a paroxysm of angina is not always directly referable to either physical exertion or emotional excitement; the great Dr. Arnold of Rugby, it is said, was attacked in his sleep without any warning by his first and fatal paroxysm; it is difficult to say what circumstances can suddenly produce the necessary conditions in these cases; but they are quite exceptional, and I think that mistake has arisen from a too ready assumption that sudden death in a person with the organic changes usually associated with angina pectoris has necessarily been due to that disease. To take John Hunter's case, for instance. He had suffered from angina pectoris for years, but from what can be read of his death it seems that the clinical features of the fatal attack were those of syncope, although probably excited in the same way as his attacks of angina. He dropped down dead, absolutely suddenly, in a fit of anger with the authorities of St. George's Hospital; he had none of the symptoms characteristic of angina, and I contend that had he not been known to suffer from angina no one from his mode of death would have attributed it to that disease. To relate the history of one case of angina which came under my notice: A man in a large way of business in London who went through in the course of a few months a succession of most severe trials, each telling severely on his health, and the last suddenly attended by true angina. The first of these troubles involved separation from his wife, and then in succession at a short interval he lost two of his children. On each of these occasions considerable depression and insomnia followed, and his heart was noticed to become evidently less vigorous and slightly enlarged; then after a few months' anxiety in connexion with his business was followed immediately by repeated attacks of the severest angina. I look, indeed, to the pathology of angina for the strongest confirmation of what I have urged in support of the view that emotional excitement gives rise to increased tension and arterial degeneration. I may just allude here to the increase of cardiac affections, shown by Sir R. Quain during the last generation, coincident with conditions vastly intensifying the worry of life and strain on the feelings.

Graves' disease.—I have already mentioned cases of exophthalmic goitre in which permanent cardiac disease results from the long-continued palpitation. I must now just revert to that disease, to consider whether the theories of its causation by changes in the cervical sympathetic may not be more reasonably supplanted by the view that mental disturbance is responsible for it.[2] It has to be remembered that no one has ever expounded how the symptoms can be due to any one kind of disturbance of the functions of the cervical sympathetic. For the goitre a paretic lesion must be assumed, but then the recognised phenomena of paralysis of the cervical sympathatic are absent, and, further, to explain the palpitation we must have an irritative lesion. No irritative lesion will explain the thyroid enlargement, though the exophthalmos might be assigned to either; but in either case the eye symptoms are incomplete if accounted for by sympathetic lesion. It can hardly be contested that in every case of this disease a morbid mental state of constant character precedes its development. The prominent features of that mental state are depression with extreme irritability; and only as life wears on, and a more placid mental state is established, do the symptoms of this disease subside. The next question obviously is, How does the mental disturbance give rise to this train of symptoms? I think if one does recognise that an antecedent mental state may fairly be held responsible for the subsequent morbid developments, there will be difficulty in refraining from the belief that the exophthalmos and goitre are in some way referable to the palpitation; in every case in which a trustworthy account of the commencement of the disease is available, there appears no doubt that palpitation has preceded the other symptoms by a considerable interval. Slight thyroid enlargement is comparatively so common in girls who suffer only from intermittent palpitation that there is little difficulty in referring it to this cause; and the exophthalmos is the least constant and last developed of the three. I have yet to be convinced that cases occur without palpitation. There has been a tendency, however, among recent writers to attribute this disease to nuclear degeneration. Experiments by Filehne have shown that by dividing the upper part of the restiform bodies to a certain depth exophthalmos and vaso-motor paralysis of certain other areas were produced, although the thyroid did not swell. Thus the conclusion is drawn that the restiform bodies contain the nerve paths of circumscribed portions of the vaso-motor centre which are paralysed in this disease, while the palpitation is attributed to some involvement of the adjacent vagus centre. Graefe's and Stellwag's symptoms are similarly assigned to a central lesion, and Dr. Fitzgerald has remarked upon the occasional association of other central paralyses. I would still hold that the evidence points to the influence of mental disturbance as the cause, and we may gladly accept the subordinate mechanism which these observers are working out, for such of course there must be.

(To be concluded.)

[2] I have lately observed that Dr. Hector Mackenzie has taken a similar view of the pathology of Graves' disease.

CHILDREN'S INFIRMARY, LIVERPOOL.—At a special meeting of the governors, held on the 13th inst., to consider the revised rules, it was resolved to reduce the number of governors necessary to elect a medical officer to forty. The forty governors to be elected would be divided into five groups in rotation.

CURE OF STRICTURE OF THE URETHRA BY MEANS OF PHYSIOLOGICAL REST.

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FEW surgeons will deny that the proposal of Mr. Mansell Moullin, contained in THE LANCET of Jan. 16th, 1892, to submit cases of inveterate penile urethral stricture to a more or less prolonged period of perineal drainage with a view to secure a permanent disappearance of the stricture, is one that will require the support of the strongest possible evidence before it is likely to supplant the methods of treatment already in vogue. The results that are generally to be obtained either after the simple dilatation of a penile stricture or a combination of this with internal urethrotomy are sufficiently satisfactory to make one demand the clearest proof of the efficacy of the more severe form of treatment before one would feel inclined to recommend, or even sanction, its adoption. A careful perusal of Mr. Moullin's paper leads me to the conclusion that a sufficiently convincing case in favour of the performance of perineal section in these cases has not been made out; and I will endeavour to show, in as few words as possible, why the method by dilatation and internal urethrotomy should be preferred.

The questions at issue are two in number. First, Are the results of the usual treatment of penile urethral stricture sufficiently unsatisfactory to warrant us in recommending patients to submit themselves to the operation of perineal section and the six weeks' sojourn in bed that it entails? Secondly, if we do recommend them to submit to the operation, can we promise a definite and permanent cure, without the necessity of dilatation at some future date? Both questions I will venture, with all diffidence, to answer in the negative. My personal experience of the operation of internal urethrotomy is perhaps somewhat limited, but from the few cases I have done and several that I have seen, I am fully convinced that when once a penile stricture has either been incised or fully dilated (preferably somewhat over-dilated) it gives but little subsequent trouble, and only requires the passage of a bougie at comparatively infrequent intervals. In illustration of this may be mentioned two cases that are under my care at the present time. Both have been the subject of penile stricture. In the case of the one an internal urethrotomy was performed two years ago, and in the other the stricture was dilated up to No. 16 English some nine months since. Both these patients have attended at intervals of three months ever since, and there has been no evidence of any marked contraction taking place again; that is, there has never been the least difficulty in passing a full-sized bougie. But granting that the patient has to pass an instrument for himself for the rest of his life, there seems to be no particular inconvenience and no special danger attaching to the performance of the operation. It has only to be passed, as the cases above well illustrate, at comparatively infrequent intervals; it has only to be introduced for a certain number of inches, and need never penetrate to the bladder; consequently there is nothing much to be feared from sepsis. And lastly, the instrument being large and bulbous-ended, the patient cannot well do himself an injury. Whether a penile "stricture," divided or simply dilated, can ever become permanently absorbed, and a radical cure thus effected, there is at present no evidence to show. It is an undoubted fact that the so-called "indurations" (as detected by the bougie or the endoscope) may entirely disappear within a comparatively short time. But these "indurations" cannot be called true "strictures," and even in these cases it appears more probable that they will disappear more rapidly under the influence of the counter-irritation that the passage of large-sized instruments exerts than under that of rest alone. The cases quoted by Mr. Moullin do not, unfortunately, give any real proof that true penile strictures can be cured by the employment of physiological rest. The true test, the after-history of the cases, is not given, either because it could not be ascertained or because the cases were too recent to have any after-history. This fact encourages me to record a case which occurred to me, and which led quite erroneously to the conclusion that a penile stricture had been cured by rest alone. In September, 1890, I operated upon a labourer for extravasation of urine. He had two strictures, one four inches and the other nearly seven inches from the meatus; the penile stricture just admitted the finest catgut bougie, the deeper one was impermeable. Perineal section was performed and all the urine passed for six weeks by the perineum. At the end of that time the first attempt at catheterisation was made, when it was found that a No. 5 English catheter went through both strictures with the greatest ease, the penile one allowing the passage of a No. 7 without any difficulty. This latter was not felt at all as the dilatation of the deeper one proceeded; and when the patient was discharged the deep stricture was fully dilated, and no trace at all of the penile one could be felt. Yet after a lapse of several weeks—the patient having in the meantime broken his catheter—he presented himself once more, with the penile stricture contracted up so that it would barely admit a No. 6.

Experience of this kind leads me seriously to doubt whether rest alone can ever suffice to cure permanently an inveterate stricture of the urethra. What it undoubtedly can do, of course, is to allay spasm, to allow all congestion to subside, and to absorb, partially at least, any masses of plastic lymph that may have been thrown out either in the mucous membrane or the peri-urethral tissues, and which are usually pretty abundant in a stricture that has been exposed to much irritation.[1] Even this latter function would probably be aided by the occasional passage of a bougie. The whole question as to whether or not a case of stricture can be permanently cured by rest depends upon whether the stricture is caused merely by masses of lymph or by organised fibrous tissue. Where the latter exists—as it almost certainly must do in strictures that deserve the name "inveterate"—it seems quite hopeless to look for its entire absorption under the influence of physiological rest, however carefully it may be carried out. Rest will reduce it to its minimum by aiding the absorption of all superfluous plastic lymph, but it cannot absorb it entirely, and it will not hinder it from eventually contracting up. Take, for example, the case of a perforation left in the soft palate after an operation of staphylorrhaphy. It is well known how greatly it will undergo contraction from the cicatrisation of its circumference. It may be urged that penile strictures are not invariably cicatricial. True; but I have examined many such strictures and have always found a certain amount of definite new-formed fibrous tissue present, and I do not remember any case of stricture that I have examined where I could say that fibrous tissue was entirely absent.

It is difficult to see why, if penile strictures can be absorbed by rest and permanently cured, the same thing should not apply to the strictures that are seated deeper down the urethra. That such is not the case is sufficiently well known; the dilatation that occurs in a stricture after a prolonged drainage of the bladder through the perineum is often very considerable, and almost always occurs to some extent; but few strictures dilate sufficiently to allow anything but a medium-sized instrument to be passed, even after many weeks' rest. The first case of Wheelhouse's operation that I saw performed was done for the relief of a stricture that had remained impermeable after perineal drainage had been employed for two months. That certain cases of urethral stricture may be permanently cured by operation I have for some years believed and taught. The first case that drew my attention to the fact was met with in 1887, when I was surgical registrar to Guy's Hospital. A man presented himself for some minor ailment who had had a Syme's urethrotomy performed upon him by Mr. Howse some eighteen or nineteen months before. In answer to inquiries, he vouchsafed the information that he had discontinued the catheter three weeks after leaving the hospital, and had never had an instrument passed since. His urethra allowed the passage of a No. 12 bougie without the slightest hitch, and no trace of any stricture could be detected. Two years ago Mr. Bryant related to me the history of another case where, subsequently to the original urethrotomy and dilatation, nothing had been passed through the urethra for more than twelve months without any sign of contracting. Since then I have had two cases under my own care illustrative of the same point. The first case

[1] With a condition of more or less diffuse peri-urethritis, such as appears to have existed in one at least of Mr. Moullin's cases, rest would no doubt be efficacious in promoting absorption.

was that of an Australian gentleman, on whom I performed Wheelhouse's operation in January, 1890, but of whom I lost sight almost directly, as he returned to Australia. He had instructions to pass a large bougie once every six weeks or two months. I saw him in November last, and passed a No. 12 bougie without meeting with any trace of the stricture. He then informed me that he had lost his bougies on the voyage out to Australia, and that "he had been too busy to see about getting any more"; and that, consequently, no instrument had been passed for more than eighteen months. The second case was that of a man on whom I performed Gouley's operation for stricture in June last, at King's College Hospital. No catheter was left in; it was merely passed every six hours for the first five days, and after that the man micturated normally. No urine came through the perineal wound, which healed by first intention, and the patient left the hospital on the fourteenth day. A bougie was passed once a week for the first three weeks; then once, a month later; then again after an interval of two months; and finally four months later still. He is to have the next one passed in eight months' time. A No. 12 detects no trace of stricture. The possibility of a permanent cure of stricture after operation quite accords with what we find on examining the site of such operations after death. The incision in the strictured urethral wall is occupied by a very delicate film of cicatricial tissue which presents a marked contrast to the dense tissue of the stricture itself. It can well be understood how such a thin web can be kept permanently dilated by the urine stream. And it follows, too, from this that the reason why old dense strictures, where there is foul urine &c., relapse more rapidly after urethrotomy than do those where such changes have not taken place, is that the septic condition of the perineal wound favours the production of new connective tissue, and so replaces the divided stricture by one of new formation.

Weymouth-street, W.

ENLARGEMENT OF THE SPLEEN IN YOUNG CHILDREN.

BY J. WALTER CARR, M.D., M.R.C.P.,
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As in adults so in children, enlargement of the spleen may be due to numerous and well recognised causes, some of an acute, others of a chronic character. Typhoid fever, malaria, leucocythæmia, tuberculosis, embolism, lardaceous disease, cirrhosis of the liver,—each one of these may of course produce a greater or less hypertrophy of the spleen. But whilst in very young children enlargements due to any of the above-mentioned conditions are comparatively rare, and not usually difficult of diagnosis when they do occur, there is a splenic hypertrophy found in infants, very chronic in its course, very serious in its prognosis, so frequent in its occurrence as probably to out-number all the cases of enlarged spleen due to other causes during infancy, and yet so ill defined in its etiology that it has hardly acquired a distinctive name, and in many medical works is only referred to incidentally under the heading of rickets or of syphilis. Nevertheless, its course, symptoms, and pathological anatomy appear to be so definite and characteristic as to constitute it a disease *sui generis*, and entitle it to as well-defined a place in our classification as has been assigned to the allied conditions leucocythæmia and lymph adenoma, from which however, as we shall presently see, it is easily distinguished. Perhaps the term "splenic anæmia," proposed by Griesinger, is the best to assign to it. It is necessary to distinguish a spurious from a real enlargement of the spleen in children; sometimes, without any genuine hypertrophy, it is considerably longer and thinner than natural; under such circumstances, particularly should it be pushed down by the contraction of a rachitic thorax, the lower end may be felt below the ribs, but it feels soft, not hard; there are none of the characteristic symptoms associated with genuine hypertrophy, and several times at a necropsy I have found that, though considerably elongated, the weight of such a spleen has not been abnormal or its consistence increased.

The following description of the symptoms and course of the disease is based on thirty cases observed during the last three years at the Victoria Hospital for Children, Chelsea. During that period not a single example of genuine leucocythæmia came under my observation, and the cases of enlarged spleen from all other causes (chiefly tubercular) in children under three years of age were fewer in number than those of simple splenic anæmia. Sixteen of the patients were males and fourteen females; in age they varied from two months to two years and a half when first seen. They were usually wasted, but by no means invariably so, particularly the slighter and earlier cases; but only in one or two instances were the children really plump and well developed. There was nearly always some pallor; this was extremely marked in the more severe cases, and was associated often with the more especially characteristic splenic appearance—a waxy colour with a faint olive tint, indicating almost at a glance the nature of the case. The degree of enlargement of the spleen varied; in nearly every instance it could be distinctly felt at least an inch or an inch and a half below the costal margin, and in about half the cases it extended down to the level of the anterior superior iliac spine and forwards nearly to the umbilicus. It always felt exceedingly hard, and was not usually tender. It must be remembered that in children the costo-colic fold of peritoneum is much firmer than in adults; so that in the earlier stages of splenic enlargement it directs the lower end of the organ forwards, and so prevents it from projecting as far below the ribs as it otherwise would, and perhaps causes it to encroach more on the thoracic cavity. The liver was apparently enlarged in about half the cases; but little importance can be attached to the extent of its projection below the costal margin, on account of the varying contraction of the chest by rickets, and the weight of the organ post mortem never indicated any decided hypertrophy. There was usually also swelling of some of the external lymphatic glands, but never to any marked extent; they were always hard and freely movable. In four of the fatal cases (8, 15, 16, and 30) hæmorrhages occurred—either epistaxis or small scattered purpuric spots in the skin, or both,—and Case 6, the child recently under treatment in Westminster Hospital, had profuse epistaxis shortly before admission there. These hæmorrhages probably depend solely on the severe anæmia, for, as Dr. Stephen Mackenzie pointed out in his Lettsomian Lectures on Anæmia in 1891, they may be met with whenever the proportion of red blood-corpuscles falls below 50 per cent. of the normal, a condition which obtained in all the cases referred to. In a similar way may be explained irregular attacks of moderate pyrexia, which occurred from time to time in the more severe cases whilst under observation in the wards. There was seldom an opportunity of examining the urine, but in two patients (Cases 15 and 30) a faint cloud of albumen was present, and in three others (Cases 5, 6, and 7) it was noted to be absent. According to Dr. Crozer Griffith, in Keating's Encyclopædia of Diseases of Children (vol. iii., page 799), the urine in this disease does not contain albumen. The blood was examined, once or oftener, in fifteen of the children, and showed merely a condition of simple anæmia. In the most severe cases it was distinctly watery and paler than natural, and flowed very freely from a small prick. The red corpuscles always ran into rouleaux; they varied considerably in size, but presented no abnormal shape. In number they ranged from 32 to 78 per cent. of the normal; in only three instances, however, was the percentage less than 40, and two of these were fatal; the general range was from 45 to 70 per cent.; and even this may give somewhat too low an average, as in several cases in which the blood was not examined the anæmia was not at all profound. In one infant (Case 8) the number of red discs fell in eleven weeks from 64 per cent. to 37 per cent., then under treatment with reduced iron rose again to 63 per cent., when the patient died of diphtheria. In another instance (Case 20) which steadily improved the percentage rose from 62 to 82·6. The percentage of hæmoglobin was ascertained in seven of the cases, and was not found to bear any definite relationship to the number of red corpuscles; in all, however, as in simple anæmia and chlorosis, and in contrast with pernicious anæmia, it was deficient, both actually and also relatively, to the number of corpuscles. The hæmoglobin value of the individual corpuscle was usually from 50 to 67 per cent., but in one case (19) in which the percentage of red discs was 78, two estimations of the hæmoglobin gave only 25 and 28 per cent. respectively. From the few cases in which several estimations were made the increase or decrease of

hæmoglobin seemed roughly to vary *pari passu* with that of the red corpuscles. It is perhaps doubtful whether the results of examination of the blood with the hæmoglobinometer are very reliable in childhood, and I shall be glad to hear the opinions of others on this point. In nearly every instance there was a slight excess of white corpuscles, but this was not marked, especially when we remember that in young children they are normally somewhat more numerous relatively than in adults—in infants, 1 white to from 130 to 210 red corpuscles. In only one instance (Case 8) did the percentage of white discs approach the leucocythæmic condition, and that was after epistaxis, when the red corpuscles fell to 37 per cent, with 1 white to 33 red ones. In this case all the lymphatic glands, both internal and external, were enlarged, though none were bigger than a small filbert; even the Peyer's patches and solitary glands of the intestine were found distinctly swollen. In the other cases there was 1 white to from 70 to 225 red discs, averaging about 1 to 100, so that it is quite evident that this disease is distinct from leucocythæmia.

It is well known that anæmia is often a prominent symptom of rickets, and, as nearly all these children were rickety, the question naturally arises whether the blood changes described were dependent mainly or even entirely upon the rickets. It seems to me, however, that, at any rate in the marked cases, the anæmia was always more profound than could be explained by the rickets alone, and, more particularly, that the diminution of red corpuscles does not occur to such an extent in simple rickets. Thus, in one case of well-marked rickets and anæmia, I found 98 per cent. of red discs and only 28 per cent. of hæmoglobin, and in twins with marked rickets and pallor the percentage of red corpuscles in each was about 80 and of hæmoglobin 70. As I have already stated, in none of my cases of splenic enlargement did the percentage of red discs exceed 78. Moreover, in the blood of cases of simple rickets there does not seem to be the same tendency to even a slight excess of white corpuscles.

The course of the disease is essentially chronic, and so it is difficult in out-patient practice to trace the cases to their termination. In some instances the splenic enlargement and the anæmia steadily increase, hæmorrhages occur, and the child dies at last from exhaustion, usually complicated by more or less catarrh of the mucous membranes, leading to bronchitis and broncho-pneumonia, or to diarrhœa. Ten of my thirty cases are known to have died mainly in the way just mentioned; but this is, perhaps, a higher mortality than that of a number of cases taken indiscriminately, as the thirty cases include an undue proportion treated as in-patients on account of their specially severe symptoms. Six of the cases could not be traced, of the remainder thirteen were found either to have completely recovered or to be steadily improving; Case 6 alone remained *in statu quo*. In Case 3, after only four months of treatment, the child's general condition and colour were greatly improved and the spleen could scarcely be felt, but this was a slight case from the first, and the spleen was never much enlarged. In Case 10, examined after a year and eight months, the spleen could not be felt, and the red discs had risen from 42 per cent. to 104 per cent. In Case 19, after eight months, although the spleen was still enlarged, the red corpuscles had risen from 78 per cent. to 98 per cent., and the hæmoglobin from 26 per cent. to 45 per cent. In Case 20 the spleen at first reached to the level of the anterior superior iliac spine, and the anterior border was in the nipple line; the lower border of the liver was felt half way between the umbilicus and the ribs; the inguinal glands were enlarged. Five months later the child was stouter and of better colour, the spleen could not be felt, the liver only projected an inch below the costal margin, and there was no glandular enlargement. From the first, however, the anæmia in this case was not extreme—viz., red discs 62 per cent., hæmoglobin 45 per cent.; the former rose to 82·5 per cent., the latter remaining about the same. In Case 22 the spleen was nearly as large as in the one just described; after three months it only reached an inch below the ribs, and there was much improvement in the child's colour and nutrition; it unfortunately succumbed to an attack of whooping-cough. Occasionally there seems to be no definite change after several months of treatment; Case 6 shows this especially, as after two years the child's condition was almost unaltered, the anæmia much the same, and the spleen a little larger.

The prognosis of cases of splenic anæmia as given by different writers varies immensely. Crozer Griffith, in Keating's Encyclopædia, says that permanent cures are of the rarest occurrence unless the splenic enlargement be due to syphilis or malaria; Henoch says that most of the children die from progressing anæmia, wasting, and, finally, dropsy of the cavities; Eustace Smith, on the other hand, gives a much more favourable prognosis; whilst Ashby and Wright state that most of the cases improve after a while, but that their course is very chronic. From my own observations I should say that the prognosis in these cases is not necessarily bad, though the disease will probably be of long duration; but should the spleen get very large and the anæmia profound, there is of course great danger of death from simple asthenia, from pulmonary trouble, or from the onset of any acute specific disease, which will probably prove rapidly fatal in a child already greatly weakened. Although the prognosis is usually more unfavourable the greater the enlargement of the spleen, yet it is interesting to note that in Case 4, in which the child steadily got worse and had marked anæmia, the organ was only slightly enlarged, weighing one ounce. Later on I shall mention facts which seem to point to the presence of well-marked syphilitic manifestations being a particularly unfavourable indication.

Morbid anatomy.—A necropsy was obtained in seven (Cases 4, 8, 15, 16, 26, 27, and 30) of the ten fatal cases. In all there were great emaciation and pallor of the internal organs, in four marked bronchitis or broncho-pneumonia. Case 4 was the only one in which there was any sign of tubercle, in this case there was a mass of caseous mesenteric glands. The liver was but slightly, if at all, enlarged in any instance, its greatest weight being fifteen ounces and a half. In appearance it was either normal or paler than natural; in only two of the cases (4 and 26) was it notably tougher than usual, and in two others (8 and 15) the consistence was very slightly increased. In one case (8) there was a depressed scar-like patch in the liver, perhaps the remains of a gumma; this was the only indication of visceral syphilis found in any examination. We may conclude, then, that the changes which the liver undergoes in these cases are unimportant, and that its enlargement is apparent rather than real, being due either to the relatively larger size of the liver in infancy or to the contraction of a rachitic thorax.

As regards the internal lymphatic glands, in no case was there any swelling of those in the thorax beyond what would be attributable to bronchitis or broncho-pneumonia. In four cases the mesenteric glands were normal; in one case, as already mentioned, caseous; and in two (Cases 8 and 16) slightly swollen. The bone marrow I have not examined, but it is said that that of the long bones may present in some cases the same dark-red lymphoid appearance frequently seen in pernicious anæmia.[1] In two cases the spleen was slightly adherent to the surrounding parts, and in a third there were a few flakes of lymph on the surface, but in no instance was there any distinct thickening of the capsule. In one case (4) the organ was but slightly enlarged, weighing 1 oz.; in the others it varied from 4 oz. to 8½ oz. in weight. In all it was firm, and the consistence was distinctly increased; the section was dark and fleshy, but otherwise fairly natural in appearance, with no enlargement of the Malpighian corpuscles. Iodine solution gave no albuminoid reaction. None of the other organs presented any noteworthy change. The microscope confirmed the naked-eye appearance of the spleen by showing that the enlargement was apparently due to a simple hypertrophy, with more or less increase of fibrous tissue. In one case (8) there were scattered patches having somewhat the aspect of albuminoid change, a condition probably identical with the hyaline fibrosis which Cheadle has described.[2] The microscope showed no important changes in the liver or lymphatic glands, but in some instances there seemed to be slight overgrowth of connective tissue in the kidneys. The appearances presented by the spleen seemed to be the same whether the enlargement were associated with syphilis, with rickets, or with neither of these diseases; it also resembles the ague spleen. The condition described corresponds with the descriptions given by other writers, especially by Henoch and by Ashby and Wright; but I cannot be sure whether Jenner refers to a similar condition, when in his lectures on Rickets he speaks of an albuminoid infiltration of the spleen, with some simi-

[1] Dr. Crozer Griffith's article on "Splenic Anæmia," in Keating's Encyclopædia of Diseases of Children.

[2] Brit. Med. Jour., ii. 1888, p. 1148.

lar affection of the liver and lymphatic glands, leading to enlargement of all these organs, and causing the emaciation seen in some cases of rickets. He describes the spleen as non-adherent, capsule scarcely if at all thickened, the substance of the organ tough but elastic, pale-red or dark-purple in colour; liver usually only slightly enlarged, heavy, tough, and semi-transparent; external lymphatic glands enlarged, not tender, and never inflamed. Although he speaks of an albuminoid infiltration of all these organs, he says that it has not the characters of the albuminoid change described by Virchow, and especially that it does not give any reaction with iodine solution. On the whole, from the general symptoms and accompanying conditions of these cases, it seems probable that the so-called albuminoid infiltration of the spleen associated by Jenner with certain cases of rickets is identical with the condition which I have been describing.

(To be concluded.)

A NOTE ON REID'S UTERINE DILATORS.

BY JAMES BRAITHWAITE, M.D. LOND.,
OBSTETRIC PHYSICIAN TO THE LEEDS GENERAL INFIRMARY.

IN 1888 Dr. Reid of Glasgow brought under the notice of the profession his uterine dilators. These consist of five conical dilators about two inches in length, which fit on a handle or stem common to all. The smallest of these dilators is a quarter of an inch in diameter at its narrow end, and three-eighths of an inch at its widest or proximal end. The largest is one inch in diameter at its widest part. The principle of action is that of a screw wedge. All the dilators have on the surface a shallow blunt screw, so made as not to cut the mucous membrane of the cervical canal of the uterus when introduced by a rotatory movement, but at the same time sufficiently deep to retain a hold on the parts through which they pass. When the British Medical Association met in Glasgow in 1888 I saw these dilators and procured a set from the makers, Messrs. Hilliard and Sons of Glasgow. They have served me in such good stead since in cases in which nothing else would have done that I propose to give two or three examples of their utility, especially as I have never since seen them mentioned in any way in the current medical literature of the day, and their value seems to be not known or appreciated.

In April, 1890, I saw with Dr. Thompson of Great Ouseburn a lady who was in such a condition from pregnancy vomiting that it was necessary to empty the uterus of a two months' fœtus in order to save her life if possible. The cervix was extremely rigid. I dilated first by Hegar's dilators, but could only get to size 9. By no justifiable force could any larger size be got in; so I then inserted a large laminaria tent, not having Reid's dilators with me. Next day I again tried with Hegar's; but I only got in two sizes larger. I now used Reid's, which I had meanwhile procured, and dilated at once to the fourth size; so that the left index finger passed through the cervix, and I completely emptied the uterus of a quantity of semi-putrid secundines by means of Gervis's ovum forceps, but no fœtus was found. The patient rallied for a day or so, but soon sank, the vomiting continuing. For three weeks previously the stomach had retained no food whatever, so this result was almost to be expected. The point, however, in the case is the ease with which Reid's dilators acted after the failure of Hegar's.

In October last I had a similar case, but more urgent still, and without these instruments I believe a successful termination of the case would have been impossible. A gentleman married a lady in California. Within a short time she became pregnant, and incessant vomiting necessitated the induction of abortion. She recovered from this, and became pregnant for the second time, but there was no vomiting, and she was delivered of a healthy male child at full term. She was attended by Drs. Ellerton and Clayton of Aberford, near Leeds, for she came to England to her husband's home. Becoming pregnant for the third time, vomiting came on at once; and when I saw her with her medical attendants named, she appeared to be within two days of her death. the stomach having retained no food for fourteen days. There was no time to wait for anything; the uterus had to be emptied at once. The cervix was closed firmly and felt somewhat hard. I dilated it to the fourth size of Reid's dilator. This took about an hour, as plenty of time should be given in the use of such a powerful instrument. The uterus was then emptied by means of Gervis's ovum forceps. This was upon a Wednesday; the vomiting abated considerably on the Thursday and ceased on the Friday, and the patient then recovered. I had a letter a week afterwards giving these particulars. I believe that no other dilator could have accomplished this, for great power was required; and the upward pressure necessary to introduce Hegar's instruments, one after the other, would have caused the vulsellum with which the uterus must be held to tear out. We have used this instrument extensively in the infirmary wards in the treatment of dysmenorrhœa. I will give one case of dysmenorrhœa, a private one, however, in illustration of its use in this disease.

A lady, thirty-four years of age, and unmarried, had suffered from dysmenorrhœa since she was eighteen, apparently induced by over-exertion in walking. It has become much more severe the last few years, and she had derived no benefit from the treatment of the physician who usually attended the family. In February, 1890, I dilated the cervix with Hegar's dilators to size 6 or 7, and inserted a large laminaria tent for the night. On withdrawing this next morning I did nothing further, as the parts were fairly but moderately dilated, and she had taken the ether necessary so badly that I did not like to give it again. No benefit whatever followed this dilatation except for the first time following. In May, 1891, I again dilated and used the tent as before; but on the second morning dilated with Reid's dilator to size 4, not passing it quite up to the full length. This has so far proved an absolute cure. I saw her a few days ago, and she has been as nearly as possible free from pain and is in good health, whereas she was previously almost a chronic invalid.

I could give many other illustrations, but those given show, I think, the great value of Reid's dilators. In use they simply require oiling and then passing into the cervical canal. The small end of the wedge is quite rounded and smooth. The handle is then rotated and the wedge screws itself in, dilating very gradually, but with immense power. I have never used the largest size, as the fourth one allows of the index finger passing, and I believe the largest size too large for an unimpregnated uterus, and possibly involving risk of laceration. It is necessary to steady the cervix by a vulsellum, or hook, but there is no risk of this tearing out or lacerating the tissues, as I have several times seen when Hegar's are used, for there is no upward dragging. Since this paper was written I have had a patient almost dying from hæmorrhage from what was supposed to be a sloughing fibroid. The cervix was contracted and did not admit the finger, and was woody and hard. It was dilated to the largest size with Reid's dilator, and as much as could be reached of the tumour removed. I thought at the time that it was all removed. The patient died within twenty-four hours from, as the necropsy showed, a large abscess full of offensive pus, but the cervical mucous membrane showed no trace of the action of the screw dilator, and it was examined very carefully in a good light.

I hope these cases may lead to a more general use and appreciation of the instrument, for which the thanks of the profession are due to Dr. Reid.

Leeds.

RELATION OF INFLUENZA TO CLIMATIC CONDITIONS AND TO ZYMOTIC AND RESPIRATORY DISEASES.

BY C. ROBERTS, F.R.C.S. ENG.

THE borough of Nottingham has issued an admirable coloured chart and a series of meteorological tables illustrating the relation of the number of deaths from various causes to the principal meteorological conditions on each day of the year 1891, but without any comments. As there was an epidemic of influenza during the ten weeks from April 22nd to June 30th, the chart affords an opportunity of studying the relation of this disease to climatic conditions and the prevalence of other diseases, independently of all

preconceived ideas. The chart and tables do the compilers great credit, and their example might be followed with great advantage by other corporations. The meteorological curves do not throw much light on the cause and spread of the influenza. There was a high barometer, with a low and narrow range of temperature and a corresponding rainless and sunless condition, during the seven weeks preceding the outbreak of influenza. During its prevalence there was nothing remarkable in the climatic conditions, except an extreme range of temperature from a maximum of 72° to a minimum of 29°, equal to 43°, from May 13th to 18th, the period of the maximum death-rate from influenza and respiratory diseases. There were corresponding variations in the sunshine, the days of high temperature being very sunny, and those of low temperature sunless. There were ten days with hardly any sunshine at a period when sunshine is most plentiful in this country. There was nothing exceptional in the atmospheric pressure, rainfall, or direction of the wind during the ten weeks in which deaths from influenza were recorded.

When we examine the columns representing the number of deaths from various causes, we come on the remarkable facts that influenza usurps to a large extent the place of the zymotic diseases, and anticipates to a great extent the lethal effects of other diseases. The deaths from zymotic disease fall from 101 in the ten weeks before the influenza to 77 during the ten weeks of its prevalence, and to 31 in the ten weeks after it has disappeared. The deaths from respiratory diseases, which were 191 in the first period, rose to 262 during the epidemic, and fell to 78 during the ten weeks following it. The variations of deaths of persons above sixty years follow the course of the respiratory diseases; there were 234 in the first period, 302 in the influenza period, and 147 in the subsequent period of ten weeks. The following table shows at a glance these fluctuations in the deaths. As the epidemic occupied ten weeks I have arranged the other periods in groups of ten weeks each. The influenza period forms the centre group. The population of Nottingham in 1891 was 212,662, and the death-rate during the year 19·3 per 100.

	Deaths from zymotic diseases.	Deaths from respiratory diseases.	Deaths above 60, from all causes.
Ten weeks preceding the influenza, from Feb. 12th to April 23rd	101	191	234
Ten weeks of epidemic influenza, from April 23rd to June 1st. (Zymotic 77, Influenza 100)	177	262	302
Ten weeks following the influenza, from June 2nd to Aug. 9th	31	78	147
Average	103	177	228

From these figures we see that influenza has, as it were, picked out the bad lives from the subsequent period, for if we average the deaths of the influenza and subsequent period we obtain the numbers 104 for zymotic and influenza, 170 for respiratory diseases, and 224 for deaths above sixty years of age, values which give only 3 zymotic deaths in excess of the pre-influenza period, and 21 respiratory and 10 old-age deaths less than that period. Some allowance must be made for the lower death-rate of the summer than the spring months; but, making ample allowance for this, it is obvious that the 100 deaths attributed to influenza were not an addition to, or excess of, the normal death-rate, but a mere variation of the name and time of registration of the deaths; and Nottingham as a community lost nothing (except a few weeks' labour) by the invasion of the epidemic of influenza in 1891. If further observation bears out these results there should be little reason for the panic which is spreading everywhere. May it not also help us to new views of the pathology of influenza when we find it supplanting zymotic diseases? My object is not, however, to discuss the pathology of influenza, but to call attention to its incidence, and its relation to other diseases and to the public health, as shown by the admirable chart issued by the Nottingham sanitary authorities, but which has been left for each student of vital statistics to interpret in his own way.

Curzon-street, Mayfair, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

LITHOTRITY IN CHILDREN.

BY F. A. SOUTHAM, M.B. OXON., F.R.C.S.,
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IN THE LANCET of Feb. 15th, 1890, I published a case of lithotrity at a single sitting in a boy aged three years and a half, and since that date I have performed the same operation in five additional cases, brief particulars of which are here given:—

Case.	Age.	Size of stone.	Structure.	Weight.	Duration of operation.	Result.
	Years.	Inches.		Grains.	Min.	
1	3½	Oval: ½	Uric acid	15	25	Up on 3rd day, discharged on 7th.
2	10	½ × ¾	„ „	45	70	Up on 5th day, discharged on 21st.
3	4	½ × ½	„ „	14	30	Up on 4th day, discharged on 7th.
4	5	1½ × 1	„ „	125	60	Up on 3rd day, discharged on 8th.
5	5	Oval: ⅜	„ „	13	20	Up on 2nd day, discharged on 8th.
6	3	„ ⅞	„ „	32	45	Up on 4th day, discharged on 7th.

In each instance the result has been extremely satisfactory, confirming in every respect the Indian experiences of Surgeon-Majors Keegan and Freyer, who were the first to advocate and practice this method of treating stone in male children. In performing lithotrity in young subjects, one is surprised to find how extremely tolerant the bladder is of prolonged instrumentation, the essentials for success being, in the words of Surgeon-Major Keegan, "great gentleness and a light hand." With two or three ounces of fluid (boric lotion) in the bladder, and the pelvis and thighs of the patient slightly raised so that the stone may fall back upon its posterior wall, the operation is a very simple one; in fact, much easier of performance than in an adult, the absence of any pouch or depression behind the prostate facilitating the seizure of the calculus and the removal of the fragments after it has been crushed.

Before deciding upon lithotrity in a child, it is, I think, advisable to know the exact size of the stone. This can be best estimated by measuring it with a small lithotrite when the child is sounded; more satisfactorily of course if the examination is made under anæsthesia. As cystitis is usually present to a greater or less extent, the bladder should at the same time—viz., while the patient is under the influence of the anæsthetic—be thoroughly washed out with boric lotion. For a few days previously to the operation the irrigation should be repeated each morning, an anæsthetic not being necessary. By this means the condition of the urine is improved, the cystitis is relieved, and the urethra becomes accustomed to the passage of instruments. If a soft indiarubber catheter is used for the purpose, it causes scarcely any pain, and is usually well tolerated by the patient. In cases where the urine is very offensive—as happened in Case 2—small doses of boric acid may also be given internally. In none of my patients has it been found necessary to continue the irrigation after the operation, the removal of the calculus having been followed by a subsidence of the symptoms of cystitis. I am of opinion that by the employment of what we may term "urinary antiseptics"—namely, drugs such as boric acid, salol, &c., by means of which we are able to sterilise foul or toxic urine, and at the same time relieve inflammation of the bladder walls—the risks and after-complications of lithotrity in children, as well as in adults, are greatly minimised. As the operation is often somewhat prolonged, it is very important to guard against exposure to cold, and also to diminish as far as

possible the effects of shock. With this object I always take care that the body and limbs of the child are wrapped in flannel bandages, and during the operation the patient lies upon a large, flat, hot-water tin, covered over with a blanket, which fits on the operating table. If hot fomentations are applied to the lower part of the abdomen and perineum after the operation, the child will usually pass urine in the course of a few hours without any straining or difficulty, and, beyond a slight smarting, with very little pain, usually much less than previously to its performance. In only one of my cases has there been any rise of temperature, and the following morning the patients have all been practically convalescent. It is, however, advisable to keep them in bed till the third or fourth day, when they may sit up in the ward, and at the end of a week they are usually quite fit to leave the hospital. In each instance the operation was performed with Weiss's Nos. 5 and 7 children's lithotrites, and the fragments removed with Nos. 6 or 8 evacuating tubes. In Case 4, as the stone was too large to be crushed with No. 7 lithotrite, it was first broken up with one of Weiss's small lithotrites for adults (about No. 9 size), and the operation was completed with Nos. 5 and 7 lithotrites. This case illustrates the fact that a calculus of considerable size—viz., over an inch in diameter—may be safely crushed in a young child. I believe that in the future lithotrity will quite supersede lateral lithotomy in children, and also that if a stone is too large to be crushed, it will be an indication for the selection of the supra-pubic operation.

Manchester.

A CASE OF HEMICHOREA FOLLOWED BY PARALYSIS (PARTIAL HEMIPLEGIA) IN A CHILD FOUR YEARS OF AGE.

BY E. A. PIGGOTT, L.R.C.P. & S. EDIN., L.S.A. LOND.

THE following case is of interest not only as occurring in so young a child, but also as exemplifying the embolic theory in the causation of chorea. The partial hemiplegia, I take it, as clearly indicating cerebral breach of structure, in all probability dependent upon capillary embolism. For the early history of the case I am indebted to the parents of the child, at which period she was under the care of another practitioner. The case came under my observation only a short time before the development of the hemiplegic symptoms. M. D——, aged four years, the child of healthy parents, suffered more or less from convulsions during dentition, the commencement of which was delayed until she had attained the age of eighteen months. When she had completed her fourth year she was attacked with influenza, which was generally epidemic at the time (March, 1890). During the interval of time between the subsidence of the convulsions synchronous with dentition and the attack of influenza the child enjoyed perfect health. The attack of influenza was succeeded by marked choreic movements in the left upper extremity, the facial muscles on the left side being the next affected; the disease, assuming a decidedly progressive character, ultimately reached the left lower extremity. The muscular contortions were almost entirely limited to the left side of the body, and were often present during sleep, frequently causing the little patient to awake with a sudden start. Locomotion was also interfered with, the left leg being drawn along the ground in walking. A nourishing diet, consisting of milk, beef-tea, eggs, &c., was ordered, and a mixture containing compound syrup of the hypophosphites, combined with small doses of liquor arsenicalis, together with cod-liver oil, prescribed. Under this treatment there was a marked improvement in the choreic symptoms; the improvement, however, was of brief duration. Decided evidence of hemiplegia soon commenced to manifest itself, paralysis of the left facial muscles, partial ptosis, and considerable photophobia, with loss of power in the left arm to such an extent that there was complete inability to grasp any object, the child using the right hand to endeavour to assist the left, finally being unable to lift the arm at all. The bowels were relieved naturally until this date (Oct. 13th, 1890). On Oct. 15th I was called to see the patient, as the symptoms were alarming. On arrival I found the following condition—viz, pupils unequal, left dilated, right contracted; the conjunctiva of the left eye totally insensitive, with diminished sensibility in right conjunctiva; marked trismus, the jaws being firmly closed. Tonic contraction of the extensor muscles of the left arm and forearm and both legs, the left being the most complete. Temperature in axilla 100°; pulse about 120, weak; respiration normal; child groaning slightly at intervals, and moving the head from side to side. A small quantity of liquid nourishment was administered by forcibly separating the jaws. During the progress of the disease, especially after the paralytic symptoms developed, the child was constantly complaining of pain in the head, and would cry out suddenly, frequently awaking from sleep with a scream—Oct. 16th: The condition to-day nearly approached that of complete coma. Temperature normal; muscular jerkings almost continuous in the left upper extremity, which remained rigidly extended. The fingers were clenched, and the hand drawn back to such an extent that it almost resembled in appearance a complete dislocation at the wrist-joint, both feet being similarly affected, and simulating the condition represented in a case of talipes equino-varus. The bowels were obstinately confined, the urine being passed involuntarily. From this date the patient gradually passed into a state of profound coma, sordes forming upon the lips, with a total inability to take nourishment, death finally releasing the little sufferer on Oct. 23rd. A post-mortem examination was not permissible.

The foregoing case, in a great many of its details, resembles tubercular meningitis. Both parents being young and vigorous, there was no reason for supposing the child directly inherited a tuberculous diathesis; doubtless a tendency to brain mischief existed, owing to the convulsions attendant upon dentition. It is also a question what share, if any, the attack of influenza had in the production of the fatal cerebral symptoms.

Clare, Suffolk.

ATRESIA ANI.

BY JOHN K. MURRAY, M.B. EDIN.

A WELL-DEVELOPED child three weeks old was brought to me in September, 1891. I found a dimple marking the usual site of the anus, and the fæces passed per vaginam. On passing a probe the fistulous communication could not be found. Under ether, administered by my friend, Dr. Batchelor of Queen's Town, I cut down on the normal site of the anus, dividing the tissues in the middle line to the depth of an inch and a half. I could find no rectal cul-de-sac. The depth of the wound precluded further dissection. To get freer access I partially divided the posterior vaginal wall, and having passed a probe into the posterior fornix vaginæ I at last succeeded in making it enter the bowel. By inserting my forefinger into the wound I found the point of the probe just a little behind the vaginal wall. I accordingly cut down on it. This was followed by a free gush of fæces. I put a stitch in the site of the recto-vaginal septum and closed the vaginal opening by absorbent wool. A bulbous silk catheter was tied in the rectum. The wound was syringed daily. By the third day no fæces escaped per vaginam. The catheter was removed, and passed into the bowel four times daily. When seen in the early part of March, 1892, it was found that a well-formed anus was present, rather nearer the vagina than in the normal perineum. No fæces have escaped since the third day per vaginam.

In this case the dimple marked the arrested deepening of the epiblastic fold which grows into and becomes continuous with the mesenteron. The high site of the rectal cul-de-sac probably indicates a defect in the development of the mesenteron itself. As regards the operation, the main difficulty was in striking the cul-de-sac, which was not distended by fæces, free egress being afforded by the vagina frequently during the operation. It is recommended by Dieffenbach and Barton[1] that, if possible, the cul-de-sac should be detached from the vagina and stitched to the skin. This may be feasible where the cul-de-sac is blind or where it comes low down, but where the cul-de-sac terminates at its communication high up in the fornix vaginæ such a proceeding is difficult, even hazardous. The result in this case shows the tendency of nature to revert to normal channels when such are re-established. The line of

[1] Medical Recorder, vol. vii., p. 357.

force was in the direction of the wound when defecation took place, consequently the healing of the trench-shaped wound formed a natural prolongation of the rectum ending at the skin.

Whittlesea, Cape Colony.

DIFFUSE HÆMATOMA OF THE BACK; DEATH.

By G. OSCAR JACOBSEN, M.R.C.S., L.R.C.P. LOND.

I WAS called on March 18th to see T. E——, who, I was informed, had on the previous night hurt his back in a fall. On arriving I found that the patient, a man aged fifty-eight, seemed to be in considerable pain, and on examination of the back discovered a large swelling, which corresponded roughly in site and size to the right scapula. The tumour appeared to be fluid, as there were distinct evidences of fluctuation. There was no discolouration of the skin. From the history I took it to be a hæmatoma, and prescribed a lead lotion, rest, and sedatives. I was unable to obtain ice. The patient, I was told, had got up from the sofa, and was crossing the room, and during the momentary absence of his wife was seized with an attack of giddiness, and had fallen with all his weight with the right side of his back against the sharp jamb of the door-post. I had been attending him for kidney disease, and what I took to be Ménière's disease, the patient complaining of constant attacks of vertigo associated with one-sided deafness. The next day, the 19th, the man seemed no worse, but the swelling had increased. The third day he seemed in a good deal more pain, and the swelling now extended upwards under the muscles of the right side of the neck nearly as high as the mastoid process, downwards to the small of the back, and had, moreover, now become very much discoloured. The next night I was sent for again, and found the patient in a very bad way, delirious, with running pulse and great dyspnœa—in fact, moribund, and he died the next morning, the 23rd, at 5 A.M., a little over five days from the time of the accident. A necropsy was ordered by the coroner, which I made about thirty hours after death. On inspection there was found to be considerable swelling on the right side from the mastoid process to the lumbar region. This was distinctly fluctuating, and there was very great discolouration of the skin, not due to post-mortem changes. On opening the chest the first thing noticed was infiltration of all the pectoral muscles of the right side with blood. On dissecting them carefully back this was found to become more and more intense, and after reaching a point just behind the mid-axillary line there was found underneath the latissimus dorsi a huge cavity which contained over three pints of semi-fluid and coagulated blood. The intercostal muscles were sodden with blood, and at one point seemed breaking down into the pleural cavity. The right pleural cavity contained a fair quantity of blood-stained fluid, and towards the base some very recent lymph, which also was found on the surface of the base of the lung. The lungs appeared healthy, and the other organs appeared fairly healthy, with the exception of the liver, which was somewhat enlarged, and the kidneys, which were granular, with diminished cortex, and the capsule very adherent. There was atheroma of the aorta and thickening of the aortic valves.

This case I think interesting and worthy of record, owing to the comparatively slight injury—namely, the fall against the door-post—the large amount of blood effused, and the considerable length of time elapsing before death. The extent of the hæmorrhage I attributed to the brittle state of the arteries consequent upon the patient's kidney disease.

Ashwell, near Baldock.

FOOT-AND-MOUTH DISEASE IN KENT.—The foot-and-mouth disease in the Sittingbourne district is, it is stated, increasing, and threatens to become epidemic. The third outbreak in the course of a few days was reported on the 16th inst., when it was discovered that the malady had made its appearance among a flock of about 150 sheep on Oakwood Farm, near Sittingbourne, belonging to Mr. G. H. Dean. This latest outbreak has had the effect of extending the boundary of the infected district. This was apparent on Good Friday, when a large number of pedestrians who attempted to pass through Gore Court Park found several of the footpaths closed to the public and guarded by police.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prooemium.

WESTMINSTER HOSPITAL.

ENTERIC FEVER; RIGHT HEMIPLEGIA WITH APHASIA; RELAPSE; DEATH.

(Under the care of Dr. DONKIN.)

THIS case is placed on record on account of the exceptional occurrence of hemiplegia in connexion with enteric fever. In connexion with this case Dr. Donkin observed that some few cases have been reported, but mostly without necropsies. Two cases in children with recovery were recorded by Dr. Gee and Dr. Cayley respectively in the *Medical Times and Gazette* for 1878, vol. i. The blocking of the cerebral arteries is usually put down, according to inference from probability, to an embolic cause, and where no cardiac abnormality is demonstrated or indicated the embolism is supposed to arise from a broken-up thrombus in the left heart. In this case there was nothing noteworthy in the heart's structure or contents. We have probably to choose between thrombosis *in situ* or some temporary clotting in the heart's cavities leading to embolism for explanation of the arterial blocking which was discovered both in the brain and the lung. It seems much more probable that both the clots found were produced *in situ*, and that their cause was the same—viz., depression of the circulatory force from the long and severe pyrexia, which was evidenced by continuous dicrotism of the pulse and great weakening or silence of the first sound of the heart. Direct impairment of the nutrition of the arteries was a part of the profound effect of continued and especially of enteric fever on the tissues generally, and morbid changes in the blood were probably important co-factors with the weakened heart in producing the result. It must be remembered that the patient had an extensive bronchitis with much dyspnœa, causing excessive stress on a heart already overworked and probably dilated in the course of the fever. In this context Dr. Donkin called attention to a case recorded by Dr. J. Abercrombie where sudden left hemiplegia occurred in a boy of six years old with diphtheria, the necropsy showing thrombosis of the right middle cerebral artery without valvular heart disease or evidence of embolism. The account of the case is abstracted from notes furnished by Mr. Gossage, house physician.

The subject of this record, aged thirty, had been nursing two cases of enteric fever in a house where the drains were believed to be very defective. One of these cases died after a severe course of the fever with profuse fetid diarrhœa. The nurse began to feel ill while at her duties a fortnight before admission to hospital on Dec. 2nd. On Nov. 28th she had severe headache, and on the following two days suffered from pains all over, and shivered repeatedly. On Dec. 2nd there were slight cough, slight diarrhœa, and some vomiting. She was the subject of chronically enlarged glands in the neck, which had been getting larger during the three weeks before admission; had had "strumous conjunctivitis" two years before; and attacks of influenza in January, 1890, and May, 1891, the last being severe. On admission, the temperature was 104° F., and there was some distension, with great pain and tenderness of the abdomen. From this date to the 15th the temperature ranged between 104·8° and 102°, being usually over 103°, and there was much abdominal pain, occasional vomiting, and abundant eruption. After five days' constipation, a simple enema was given on the 8th, and subsequently there were from one to three semi-solid or solid motions on most days till the 15th, when fairly marked morning remissions of temperature set in. On the 15th bronchitic signs were heard all over the chest. The bronchitis became severe, with considerable dyspnœa, for several days, and the temperature ranged generally between 101·5° and 103°, occa-

sionally rising to 104°, until the 22nd. After this the temperature gradually fell and the bronchitis decreased, until at the end of the month pyrexia ceased and the signs of bronchitis disappeared. On the 31st the patient complained of somewhat severe pain in the head. Her bowels had not acted for several days, and an enema was ordered on Jan. 1st. The nurse, who was about to administer the enema at 6 P.M., found the patient with much impaired consciousness and unable to articulate; she had been apparently asleep for an hour previously. On examination there was drooping of the left eyelid and considerable paralysis of the right arm and leg. She could hear well and apparently understood what was said to her, putting out her tongue—which was seemingly protruded straight—very slowly. Swallowing was somewhat difficult, and urine was passed in bed. During the next few days the paralysis became complete, and there was considerable loss of sensibility in the affected limbs; the breathing was somewhat laboured, and urine and fæces were passed in bed. On the 4th the temperature rose slightly; on the 5th it was 102° in the evening; on the 8th there were rose spots, loose motions, and some vomiting. The eruption and diarrhœa continued, and on the 14th the evening temperature was 104°, the pulse rose to 160, and the breathing became frequent and very laboured. On the 15th the pulse was running, the temperature rose to 105°, and the patient died at midnight.

The necropsy was made forty hours after death by Dr. Hebb. The brain substance was pallid, the sulci deep. The left carotid was distended with a softish dark clot which extended to its principal branches, the middle cerebral being apparently most affected, but the clot was confined to the Sylvian fissure. (Owing to certain conditions of the post-mortem examination the lower part of the carotid was not examined.) The supply area of the middle cerebral was extremely disorganised, the softened parts being the left corpus striatum, the island of Reil, the operculum, the anterior fourth of the upper internal temporo-sphenoidal convolution, and the wall of the lateral ventricle in more than its front third. The corpus striatum was of a greenish-yellow hue, and only kept in position by its attachment posteriorly to the optic thalamus. Elsewhere the surrounding nerve tissue was broken down flocculent detritus. This disorganisation affected the whole of the anterior cornu and the wall of the ventricle as far back as the front of the optic thalamus. The optic thalamus was somewhat softer than normal, and chiefly affected in its outer front part. The rest of the cerebrum, the cerebellar pons, and medulla were, except that the puncta vasculosa were large, not noteworthy. The vessels of the pia mater were to the naked eye normal. The pleura was smooth. The bases of both lungs were much congested and very friable. About the centre of the anterior edge of the left lower lobe was a faintly yellow infarct, about the size of a large walnut, having somewhat the appearance and consistence of grey hepatisation. The pulmonary arteriole supplying this was thrombosed by a dark, softish clot. There was evidence of general bronchitis. The heart and peritoneum were normal. The mesenteric glands were very large and soft, and much blood-stained. The spleen was large, tense, and turgid; parenchyma very soft and quite black. Extensive "typhoid" ulceration was found in the ileum, mostly healed, but two large and recent ulcers; also some very small recent ulcers in the ascending colon.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.

FIVE CASES OF INTRAVENOUS INJECTION OF SALINE FLUID FOR HÆMORRHAGE AND COLLAPSE.[1]

(Under the care of Mr. R. J. PYE-SMITH.)

THE following cases, all of them of extreme gravity, have recently been treated at the Sheffield Public Hospital and Dispensary by a method which deserves to have more attention called to it. In THE LANCET of Sept. 12th, 1891, Mr. Arbuthnot Lane related a remarkable case in which he had saved the life of a child moribund from hæmorrhage by the intravenous injection of three pints and a half of saline fluid. Although the intravenous injection of watery fluid is as old as transfusion of blood, having been practised by Sir Christopher Wren in 1656, and being mentioned by Libavius in 1615,[2] it has not often been used in such large quantities as those employed by Mr. Lane, except in cases of cholera, in which disease it was very successfully employed in doses up to four pints by Dr. Little at the London Hospital in 1848–49, and again by Mr. L. S. Little in 1866–67. The quantity of fluid used is, however, one of the most essential points in the intravenous injection of saline fluid. However valuable and necessary the red corpuscles and the nutritive constituents of the blood may be, it is not their diminution that gives rise to the immediate danger in cases of acute hæmorrhage. The real cause of death is a mechanical one, and consists in the loss of volume in the circulating fluid, which must, within certain limits, be proportional to the capacity of the vascular system. These limits are practically defined by the action of the vaso-motor apparatus, which, within them, automatically regulates the tension throughout the arterial system; but as soon as the limit is over-reached in the way of depletion, the regulating power which adapts the tension of the vessels to their contents ceases, the toneless arteries then fail in their share in the propulsion of the blood, and—the capillaries, the veins, and the heart being each affected in its own way—the circulation flags, and ultimately ceases. This fatal condition is reached when the quantity of blood is suddenly reduced to between three-quarters and half the normal or actually present amount in the body, and therefore long before death would have resulted from the diminished quantity of red corpuscles or from loss of nutritive material in the blood. It is not the composition of the blood but its bulk that is at fault, and the result is not oxygen starvation or tissue starvation, but failure of circulation. The rational way to meet this emergency is the intra-vascular injection of a sufficient quantity of any fluid not injurious to the blood or to any of the tissues of the body. Such a fluid we have ready to hand in "normal saline solution"—i.e., ¾ per cent. aqueous solution of sodium chloride. The fluid is prepared by dissolving clean common table salt in clear, recently boiled water in the proportion of a drachm to the pint. It is injected into any convenient vein, at the rate of a pint in ten minutes, at blood heat, and in quantities sufficient to restore fulness to the pulse or to equal the amount of blood lost; and as in cases of death from sudden hæmorrhage the amount lost is usually from three to four pints, that should probably be about the quantity employed. The apparatus Mr. Pye-Smith has employed for injecting has been, except in the first case, a simple glass syringe, as recommended by Mr. Lane, to the nozzle of which a T-shaped piece of tubing has been attached, the other arms of which were connected respectively, by means of india-rubber tubing, with the cannula in the vein and the saline solution in a jug. With the help of an assistant to compress the two indiarubber tubes alternately it is quite easy to inject continuously with such an apparatus without danger of injecting air into the vein.

CASE 1. *Gunshot wound of leg; hæmorrhage; collapse; injection of three pints of saline fluid; amputation of leg; recovery.*—H. W——, a carter aged twenty-six, was admitted on Sept. 25th, 1891. He was accidentally shot in the left leg by the discharge of a fowling-piece at a distance of two or three yards, and sustained a severe lacerated wound, with compound comminuted fracture of tibia and fibula. He bled profusely for half an hour before being got to a house, where a handkerchief bandage was tightly applied to the thigh by a priest, and he was sent in a cart to the hospital, a distance of twelve miles. He arrived about three hours after the accident, and was admitted under the care of Dr. Keeling, in whose absence and that of Mr. Thorpe Mr. Pye-Smith was called to see the patient.[3] He found him much blanched and collapsed, with small, weak, and frequent pulse and cold extremities. The man was restless, and complained of pain and thirst. It was evident that the leg required amputation, but the patient seemed quite unfit to undergo such an operation, and Mr. Pye-Smith determined to try the injection of saline fluid before submitting him to it. Meanwhile, hot water bottles were applied to the body, and he was ordered a drachm of brandy with five minims of laudanum every half hour in an ounce of hot water. Ether

[1] Part of a Clinical Lecture delivered on Feb. 11th, 1892, at the Sheffield School of Medicine.

[2] South's Chelius.

[3] Mr. Pye-Smith thanks Dr. Keeling, who was away on his holiday at the time, for leave to report the case, and Mr. Thorpe, who arrived at the hospital half an hour after him, for having kindly left the case in his hands.

having been administered, and the thigh freed from bandages, Mr. Pye-Smith cut down on the internal saphenous vein below the knee at the level of the line for the proposed amputation flap. No blood flowed from either end of the divided vein, and it was not tied. A pint and a half of saline solution was slowly injected, with obvious improvement in the pulse, which had before become so feeble as to be scarcely perceptible at times. An elastic bandage was now applied to the thigh, and the amputation, two inches below the knee, was proceeded with; but when completed, although there had been scarcely any further loss of blood, the patient's condition was so alarming that the vein was again exposed by slitting up the skin over it, as the flaps had already been stitched together and the injection repeated. Another pint and a half of saline fluid was injected, this time with still more obvious effect, for the pulse became most markedly fuller and less rapid, whilst the colour and fulness of the face were distinctly increased. The patient soon rallied, took liquid nourishment readily, and in a few hours seemed out of immediate danger. The wound healed well, and was quite closed in a month. The man is now in good health, and by no means anæmic.

CASE 2. *Fractured ribs and internal hæmorrhage from a fall of thirty feet; collapse; injection of twelve ounces of saline fluid; death; necropsy.*—H. H——, a joiner aged thirty-two, was admitted on Dec. 15th, 1891. Whilst at work on the scaffolding of a new building he was struck by the chain of a crane, and fell a distance of thirty feet on to his left side. He was at once conveyed to the hospital, where he was seen by the house-surgeon, Dr. G. Wilkinson, half an hour after the accident. He was then in a state of extreme collapse, blanched and cold, but conscious, and complaining of pain in the left side. The pulse was very feeble, 120. The pupils were dilated and insensitive to ordinary daylight. The skin was covered with cold sweat. There was much pain in the back on movement. Crepitus was felt over several of the lower ribs on the left side, and there was a hæmatoma on the left buttock. On drawing off the urine, it was found to contain a trace of blood. The patient stated that he had micturated shortly before the accident. He was put to bed with hot-water bottles, and brandy and opium were administered, and ergotine was injected subcutaneously; but in the course of an hour he was evidently worse and almost pulseless. He was quite unfit for abdominal exploration, and, as a forlorn hope, saline fluid was injected into the cephalic vein at the right elbow. By the time that twelve ounces had been slowly injected the breathing had become so feeble that artificial respiration was resorted to, with the effect of somewhat restoring the pulse for a short time. Ether was injected subcutaneously and brandy was added to the saline fluid for further intravenous injection, but respiration and circulation failed before any more could be used, and in spite of continued artificial respiration, with inversion of the body and faradization, he died three hours and a half after the accident. At the post-mortem examination it was found that the lowermost five ribs on the left side were fractured and that there was a rent in the centre of the left half of the diaphragm through which the spleen and the greater part of the stomach had escaped into the left pleura. The spleen was quite pulped, and there were upwards of two pints of blood in the left pleural cavity, besides a considerable quantity in the posterior walls of the abdomen. The stomach was a good deal bruised, and the left kidney somewhat so. The bladder was not injured. The heart was contracted, and its ventricles were empty.

CASE 3. *Burnt wound of popliteal space; hæmorrhage; collapse; injection of sixteen ounces of saline fluid; amputation of thigh; recovery.*—J. O——, a steel roller aged eighteen, was admitted on Dec. 15th, 1891. He was at work in a steel-rolling mill when a piece of hot steel ran against him, cutting and burning the back of the left thigh down to the bone at the top of the popliteal space. He bled a good deal at the time, and, although a string was tied tightly round the thigh, he lost some more blood whilst being conveyed to the hospital. On admission an elastic tourniquet was applied, and it was found that the popliteal vessels and nerves were severed, as well as the biceps and parts of other muscles. Over a pint of blood-clot was found in the trousers. He was blanched and restless, and his extremities were cold. The pulse was small and feeble, 84. He was put to bed with hot-water bottles; an enema containing brandy was administered, and brandy and opium were given by the mouth. He would not at first consent to amputation, but within an hour of admission, his pain being so great, his friends prevailed upon him to do so, and ether was then at once administered. His condition was such that Mr. Pye Smith thought it best to inject some saline fluid before amputating. Sixteen ounces were accordingly injected into the right cephalic vein at the elbow, with the effect of raising the frequency of the pulse to 120, and with such marked improvement in its volume that he then desisted, and proceeded to amputate the thigh by a single antero-internal flap, by which means he was able to divide the bone within an inch of the level of the wound and just above the apex of the popliteal space. The patient was pale for some days after the operation, but under the influence of iron and nourishment he soon began to regain his colour, and has made a very good recovery.

CASE 4. *Railway crush of both legs; hæmorrhage; collapse; double amputation (knee and thigh); injection of four pints of saline fluid; recovery.*—C. R——, a shunter aged thirty-nine, was admitted on Jan. 2nd, 1892. He was engaged coupling two empty railway trucks as they were slowly moving, when he slipped, and one of them went over both his legs just below the knees. Elastic tourniquets were quickly applied by some of the Midland Railway officials, but not till he had lost a good deal of blood, and he was sent to the hospital. When admitted he was much collapsed and moaning with pain, but it was not possible to get from him any account of the accident or even to obtain any response when he was told that his legs must be amputated. The right leg was found to be severed, except for a little skin, in the lower fourth, and was crushed to within two inches of the knee-joint. The left leg was nearly severed immediately below the knee, and the skin all round the knee was loose. His wife's consent to amputation having been obtained, ether was administered, and both legs were amputated, the right by lateral flaps through the knee-joint, leaving the semilunar cartilages as well as the patellæ; the left, by anterior and posterior flaps, just above the condyles, the patella being removed. Very little blood was lost, but his arteries felt very empty. The pulse was irregular, soft, and compressible, 132. His face was very pale. It was not considered advisable to leave him without injecting saline fluid, which was in readiness; and, as he lay quiet after the effects of the anæsthetic, it was easy to inject the fluid into the internal saphenous vein at the angle of the amputation wound in the left thigh, before applying the dressings. Four pints were steadily injected in the course of about half an hour. The effect on his pulse was marked; it fell in frequency from 132 to 104, and became much fuller, but he might probably have received still more with advantage. The face became a little less pale, but the improvement in that respect was not great. The pulse rose again to 120 before he was removed to bed, but he rallied well, and, though weak and very anæmic for a fortnight, he is now making a good, though slow, recovery. Unfortunately, a great part of the skin flaps of the left amputation wound sloughed, and an inch or more of the femur will probably have soon to be removed. There was also some sloughing in the right limb, but the tissues are now closing satisfactorily, and promise to make a good stump.

CASE 5. *Burnt wound of axilla; hæmorrhage; ligature of axillary artery; gangrene; secondary hæmorrhage; amputation at shoulder; syncope; injection of four pints of saline fluid; death*—M. T. L——, a collier aged twenty-four, was admitted on Dec. 31st, 1891. In running between a fellow workman and the fire he received an accidental blow from a pointed piece of hot steel, which penetrated the left axilla from the front. Blood spurted out of the wound, but pressure controlled the hæmorrhage till medical assistance was obtained. Mr. Pye-Smith saw the case at Waleswood Colliery in consultation with Mr. G. H. West Jones of Eckington five hours after the accident occurred. There was a small wound about two inches above the anterior axillary fold on the left side, and the axilla was distended, but the radial pulse on that side was as good as on the other (88 per minute), and sensation in the limb was perfect. With the assistance of Mr. West Jones and of Mr. J. Court of Staveley, Dr. A. Court giving chloroform, Mr. Pye-Smith opened up the axilla from below, and found it full of blood-clot. The burnt wound went directly backwards, through the pectoralis major, and penetrated to the vertebral border of the scapula. A large artery (probably the subscapular) was found bleeding, and was secured deep in the axilla, as well

as one or two smaller vessels, and it was hoped they would prove to be all, as the axillary vessels and nerves appeared to be uninjured; but on moving the arm blood rushed from the axillary artery, and it was found that there was a slit on its upper aspect in the third part of its course. It was tied and the wound then closed, drainage-tubes being inserted, and, as the man's home was two miles from the colliery, he was then sent in an ambulance to the hospital, a distance of about ten miles. Next day there was lack of sensation in the fingers, and on the following day, as gangrene appeared to be commencing, a consultation was held to decide whether to amputate at once at the shoulder or to wait for demarcation. It was decided to wait, in the hope of being able to amputate at the elbow later on, sensation still being good to some inches below that joint. In the course of a week the gangrene had greatly advanced to just below the elbow, and now a gangrenous patch showed itself on the inner aspect of the upper arm. The patient became delirious and the semi-purulent discharge from the wound was fetid. He took nourishment pretty well, but the pulse and temperature ranged high, and he looked very pale, thin, and ill. On the evening of Jan. 12th (twelve days after the accident) secondary hæmorrhage occurred, and he lost several ounces of blood. It was evident that amputation must be at once performed and the bleeding vessel secured. Ether was accordingly administered, and it was found that the gangrene now extended to the middle of the arm. Amputation at the shoulder was effected by outer and inner flaps. No large vessels bled, the axillary artery being plugged with clot and the slit in it being clearly visible. On clearing out the suppurating cavity in the axilla, it was seen that the secondary hæmorrhage was from a hole deep down on the vertebral border of the scapula, so deep that the only way to secure the vessel was by leaving a pair of long pressure forceps on it. It was apparently the posterior scapular artery, which had ulcerated on the separation of an eschar caused by the burn. Whilst this vessel was being secured the patient's pulse entirely failed, and two pints of saline fluid were at once injected into his right basilic vein, with marked improvement in his aspect, and a return of the radial pulse, which became full and bounding. In a few minutes, however, the pulse again began to disappear, and was soon imperceptible at the wrist. Ether was injected under the skin and a brandy enema given, and then the saline injection was resumed. When half a pint had been used the pulse again returned, and continued to improve whilst the remainder of the second quantity of two pints was being injected; but it never became as strong as it did during the previous injection. When the injecting was finished the respiration was very feeble and shallow, and the pulse soon became imperceptible even at the groin, and breathing ceased. Artificial respiration was now resorted to, combined with inversion of the body, and faradaism was applied to the neck and præcordium, but none of these means availed to restore either circulation or respiration, though persisted in for half an hour.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Ligature of the Second Part of the Left Subclavian Artery for the Cure of Axillary Aneurysm.—Symptoms and Pathology of Psilosis.

AN ordinary meeting of this Society was held on April 12th, Sir Andrew Clark, Bart., President, in the chair.

Mr. GODLEE read a paper on a case of Ligature of the Left Subclavian Artery for the cure of an Axillary Aneurysm. The subject of this paper was a man aged sixty-six, who was suffering from a large axillary aneurysm on the left side, with dilatation of the left subclavian artery and signs of pressure on the brachial plexus. There was also some suspicion of atheromatous disease of the aorta. Tuffnell's treatment was employed for three weeks without effect, and the aneurysm appeared to be increasing in size. The subclavian artery was accordingly tied in its second part with catgut. The wound healed by first intention and the aneurysm was gradually contracting. The patient complained of pain in the upper arm. Appended were notes by Dr. J. Mitchell Bruce, describing the condition of the thorax both before and after the operation. The justifiability of the operation, the best method of performing it, and the best form of ligature, were finally discussed.—Mr. BARWELL agreed that the old statistics on this subject were valueless, as, owing to the advance of surgery, those complications formerly so common were now no longer to be feared. In 1879 he had operated by a somewhat similar method, and in his writings he had more than once recommended it. He referred to a tabulated list of nine operations of this kind, and mentioned the causes of death in the five which succumbed. The artery being well supported by muscle fibres between the scaleni was less likely to be diseased there, and hence would better bear a ligature. This aneurysm was much rarer on the left side, and it appeared from Dr. Bruce's description of the present condition of the chest that other large arteries were involved, probably by a prolongation of the aneurysmal condition downwards. This complication was always to be feared in these cases.—Dr. TAYLOR said that the patient, who had resumed his occupation, stated that he was weaker than he originally was, though he now only complained of a slight pain over the heart. After the operation there was considerable pain of a neuralgic nature in the left arm.—Mr. MAUNSELL said that suppuration in the sac and secondary hæmorrhage were causes of death in these cases. The former had been practically abolished by antiseptic surgery, and, with regard to the latter, time alone could show whether it would be possible to ligature successfully the second part of the subclavian on the right side; that vessel being almost in a straight line with the ascending aortic arch, and therefore exposed to the full force of cardiac contraction; it also had branches springing from it, which was not the case on the left side.—Mr. HOLMES congratulated the author on the success of the operation, and remarked on the necessity of keeping an accurate record of all the cases. He himself had never resorted to this procedure nor had he seen it done, but he remembered an instance in his own experience in which he would have been better advised had he endeavoured to tie the second part instead of the third; the aneurysmal sac was so much in his way that in endeavouring to apply the ligature he perforated it and the man bled to death. There were of course dangers in the operation, but personally he did not regard the possibility of injuring the thoracic duct as a very serious one, for it was a lax structure and not liable to be wounded; on the other side ligature of the superior intercostal nerve had to be guarded against. The use of ligatures which no longer cut through the coats of the vessels had greatly diminished the risk of secondary hæmorrhage. Statistics drawn from the past were valueless, for the practice of Liston and Astley Cooper was something quite different to that of the present day, and their experience was practically useless. As to the material used for ligature, he himself had used ox aorta with much success, though he admitted that the catgut ligature was, if not superior, at any rate equal to any other. For general use, however, he preferred kangaroo tendon; it was less bulky, more easily tied, and more trustworthy than catgut. As the latter was prepared by a process of putrefaction, it could not so easily be rendered perfectly aseptic, and this was a point of great importance in relation to the so-called secondary, but in reality primary, hæmorrhage, which had proved so fatal. He preferred so to ligature the vessel as to divide the internal coats. These cases were exceedingly dangerous, and their fatality was due to the fact of the proximity of the vessel to the aorta.—The PRESIDENT agreed with Mr. Holmes when speaking of the uses of past statistics; they were not only unreliable, but misleading.—Mr. GODLEE, in reply, said that in the paper to which he had referred there was an account of eight cases, and in five of them the ligature had been applied between the scaleni. The phrenic nerve was usually quite out of the way of injury, but the duct stood in greater danger of being divided. It was situated in a region in which surgeons had carried out extensive operations for the removal of glands, and he had seen the duct or a large tributary thereof divided in a woman, who subsequently became very much emaciated. He felt sure that silk would answer perfectly well to ligature the artery in its continuity; still a ligature made of several strands of catgut could be easily placed and tied into a very small knot.

Dr. GEORGE THIN gave a communication on the Sym-

ptoms and Pathology of Psilosis Linguæ et Intestini. The author referred to his previous publications on the symptoms and pathology of this climatic affection, and illustrated the characteristic changes in the mucous membrane of the mouth and throat by relating in detail the histories of two typical cases, the appearances being illustrated by water-colour drawings. In order to emphasise the points of distinction between psilosis and other forms of tropical diarrhœa, he related the histories of two cases of the latter affection; and showed on what symptoms the differential diagnosis depended. In the two cases of psilosis which were now specially described, microscopic examination by Dr. Wethered of large, creamy, soft masses, which were passed with the stools after the motions had become solid, showed that they consisted of almost pure cultivations of bacteria, a rod-shaped bacterium, of moderate and definite size, largely predominating over the other organisms present. With convalescence, this mass gradually diminished in quantity, and, when recovery had taken place, was no longer observed. The mass was much larger in one of the cases than in the other, but the characteristics were the same in both. In the liquid diarrhœa motions of the acute condition the colour of the stools was a pale yellow; but when the diarrhœa had ceased, and the motions became solid, the patient passed, usually once daily, a large, formed, white, colourless stool; the colourless condition of the motion coinciding—over weeks and months—with a diet containing milk, farinaceous foods, fish, eggs, and chicken, with a moderate amount of vegetables and fruit. Six cases were referred to in illustration of this fact. Clinical evidence, and the evidence of a previously published case—in which there was a post-mortem examination—was adduced to show that these white stools were coincident with a normally healthy condition of the liver and pancreas. In one of the cases the fæces, on a pure milk diet, were analysed by Dr. Wynter Blyth, who associated himself with the investigation of this part of the case; and it was shown that the general percentage composition was: water, 82·73; organic solids, 14·00; chemical matters, 3·27. More than half of the organic solids consisted of neutral fats, apparently milk fat, which had passed without being digested or saponified. Nearly 6 per cent. of bile acids were present as a soap. A small quantity of organic sulphur was present as taurin, but the colouring usually found in fæces was entirely absent. As the fat in the stool was only a fraction of the quantity taken in the milk, it followed that a considerable proportion of the milk fat was digested. In both cases the exhibition of iron was not followed by the ordinary black iron stool, minute grains of metal being interspersed with the motion. Reference was made to a paper by Allan Macfadyan, Nencki, and Nieber, in which, in a case of fistula near the ileo-cæcal valve, it was shown that the food mass which passed into the colon was acid, whilst the reaction of the mucosa of the ileum was alkaline; and both the mucosa and the contents of the large bowel were alkaline. Reasons were given to show that in psilosis the alkaline secretion of the mucosa of the ileum was wanting; that the food mass that passed into the large bowel was more than usually acid; and that the fæces were acid. It was argued that the abnormal reactions of the intestine must produce abnormalities in the development of the bacteria normally present in the bowel; and it was suggested that the normal colouring matter of the stools, under the influence of abnormal bacterial products, either was not formed or was destroyed. The same condition, but to a less marked extent, obtained in some cases of ordinary tropical diarrhœa. Clinically, the fact was established that persistent white stools might exist, whilst both the liver and the pancreas were healthy.—Dr. ECCLES said that he was in a position to confirm what had been said by the author as to the condition of the intestinal contents in this very rare disease, and he referred to a paper read by him at the International Congress at Berlin in which he demonstrated that the action of salol was greatly prolonged in certain forms. He had found that when the motions were frothy and white, salol did not appear in the urine for three or even four hours after ingestion. That was a very marked prolongation, for in the healthy man it could be detected at the expiration of forty-five minutes. The explanation of this was presumably that salol was insoluble in acids, but easily so in alkalies, and it followed from this that if the salol were a long time before being split up, it must be in the presence of an acid medium. In certain cases of sprue under his notice it was found that when the motion was yellow or white and frothy, and for some time after the motions had become cylindrical, but still white, the delay in the appearance of salol was still prolonged, but when the motions became coloured as well as cylindrical, the reaction of salol appeared much more promptly, taking place in as short a time as fifty minutes. Persons might have a slight attack of sprue in a country where the disease was met with, and then the disease would seem to cease and the patient return to this country. But as long as ten years afterwards a period of cold, damp weather would determine a fresh outbreak. He had had an opportunity of applying Gunnsberg's test as to the condition of the digestive juices in sprue, and had found that there was but little gastric activity; there seemed to be an over-secretion of hydrochloric acid, from which it followed that gastric digestion might be prolonged after the food reached the small intestine, and so set up the condition of irritable ileum referred to by the author.—Dr. SCRIVEN said that sprue was quite a different disease from ordinary tropical diarrhœa; it was common in the Himalayan highlands, and had been attributed to the water. It was very chronic, extending over several years, the patient getting gradually thinner, with enfeebled digestion, associated with vomiting and sore mouth. The abdominal organs were usually found wasted, but apparently healthy; he had occasionally seen ulceration of the large intestines, but in that case he considered that the disease had been superadded to dysentery. He had also met with a kind of roughness of the ileum which seemed to form part of the disease, though as a rule the mucous membrane was smooth and thin. The most important observation of recent years with regard to the disease was that it could be cured by the aid of milk, and without medicine. He was in the habit of ordering three ounces an hour for sixteen hours daily, gradually increasing the quantity to six pints per diem. Where there was much trouble in inducing the patients to keep to the milk diet he allowed a small quantity of bread to be crumbled with the milk, and he referred to an instance in which wonderful improvement took place after seven weeks, even although a small quantity of bread had been allowed. In another case, where the patient had suffered from diarrhœa for three years, when on a milk diet the trouble ceased, and the motions became solid and white; when that occurred, the patient at once, against advice, took to general diet, with the result that a relapse took place; he repeated this five times in one year, and eventually died of the disease.—Dr. MANSON referred to the work of Bertrand and Fontan on the "Enterocolite chronique des Pays Chauds," in which they gave an account of the pathology of the disease. He himself did not regard the disease as an endocolitis, but thought that it was a condition generally superadded to some previously existing affection, such as dysentery, operations upon the lower part of the bowel, such as piles, fistula, &c., and in debilitating conditions, such as pregnancy, hæmorrhage, fatigue, mental worry, and depression. There occurred in the tropics forms of the disease in which the lower bowel was not involved, the typical tongue being present, together with dyspepsia and white stools; this condition might remain without advance for months if the patient were careful as to diet, but any error in this direction might initiate a well-marked attack, extending down the alimentary canal. It was of the utmost importance in treatment to procure physiological rest to the digestive apparatus, the patient being sent to bed so that the nourishment of the body might be carried on with the lowest possible diet capable of sustaining life. He began by ordering sixty ounces of milk, with directions that unless the diarrhœa ceased it was to be reduced ten ounces daily to a minimum of ten ounces. Patients who were refractory to milk diet could be given koumiss, which was just as efficacious. In one analysis the stools were described as containing a trace of bile acids, while in others these were altogether wanting. In several necropsies they found that the pancreas contained centres of degeneration and even suppuration; it was the most fatal of the chronic morbid conditions to which the Anglo-Indian was liable. French authors stated that in Cochin China the disease was just as common on the coast as in the interior and in low-lying districts as on the highlands. The mortality among the army of occupation had been enormous from this cause, and 10 per cent. of their deaths were ascribed to it.—Dr. JOHNSON said that the disease was at any rate indirectly caused by residence in malarial districts.

Though it had been met with as an idiopathic condition, yet a great many cases were consecutive to dysentery and malarial fever. Immediate change of climate gave the only chance of recovery, and it usually answered admirably if adopted in an early stage of the disease. From the fact that it was so very common in such places as the valley of the Yang-tse, Batavia, and other well-known hotbeds of malaria, it was impossible to avoid the conclusion that it was not merely a disease which might occur in any tropical climate, but that there must be some preceding malarial poisoning.—Dr. THIN, in reply, said that he had purposely avoided all allusion to treatment, with which he had fully dealt elsewhere. His particular object was to demonstrate the condition of tongue and throat peculiar to the affection. With relation to the existence of white stools, they had been taught by tradition that a temporary condition of this kind indicated inaction of the liver amenable to appropriate medication; but this was an affection not associated with the liver, and yet accompanied by colourless motions. He did not admit that it was a malarial affection, for though it occurred in countries where malaria was common, yet plenty of people suffered from malaria without having this disease, and it also existed in countries where malaria was unknown. He had been struck by the number of French troops which had been affected, but they probably included all cases of tropical diarrhœa under this head. Though it was apt to attack people weakened by age or pre-existing maladies, it also attacked the young and the strong. He quoted a case in which the malady could not have been superadded to any pre-existing disease, and he maintained that if the disease attacked weak people, the weakness had nothing to do with it. He quoted several opinions to show that the disease was not the same as the "hill diarrhœa" of India, and referred to the difficulty of distinguishing between it and the "sore mouth" of Ceylon. With regard to the condition of the pancreas, he observed that that organ was found to be healthy in the majority of cases examined.—The PRESIDENT desired to call attention to the similarity between this affection and certain varieties of disease known in the provinces as "mucous disease."

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, MARCH 9TH.

Mr. BENNETT MAY, F.R.C.S., President, in the chair.

Piece of Brass in Lens.—Mr. ANTROBUS showed for Mr. Eales a lad aged fourteen, brassworker, with a piece of brass situated in the lower and outer part of the crystalline lens, which had been there fourteen days, the lens retaining its transparency.

Perforated Appendicitis.—Mr. RATCLIFFE showed a case of perforative appendicitis. H. W——, aged fifteen, glass-worker. Five years ago the patient was in hospital suffering from typhoid fever. On Jan. 22nd he returned from work seeming well. He lay down on the sofa, and soon afterwards complained that he had the "bellyache," the pain being in the upper part of the abdomen, above and in the region of the umbilicus. He came to the hospital and was treated as an out-patient. On the following day (23rd) he was admitted as an in-patient, under the care of Dr. Wilson. There was no constipation before the commencement of the illness, but it was marked after. On admission, the abdomen was distended all over. No tumour could be felt anywhere, and the pain was almost entirely confined to the left iliac region, there being little or none on the right. The patient continued in this condition till the 30th, when he suddenly became collapsed, with profuse perspiration and feeble pulse, and the abdomen became extremely distended and tender. He was taken to the theatre for operation, but died before it could be done. Necropsy: The small intestine was somewhat distended throughout. There was marked general purulent peritonitis. Over the anterior surface of the vermiform appendix a piece of small intestine was matted by peritonitis so as to form an abscess cavity the size of a walnut, the upper boundary being the last two inches of the ileum, the outer wall formed by the cæcum. This cavity had burst into the general peritoneal cavity. The appendix was hidden in this cavity. There was a stump a quarter of an inch long attached to the cæcum. This stump had its lumen occluded. The rest of the appendix was adherent to the wall of the abdomen outside the cavity. No calculus could be found. There was no pus behind the cæcum. In the left iliac fossa there was a coil of small intestine more markedly inflamed than the rest, but nothing else.—*Remarks:* It is interesting to note that this boy had had typhoid fever previously, this probably causing narrowing of the opening of the appendix, which, becoming blocked, had formed a cyst, not giving rise to any symptoms. The first symptoms would be probably due to rupture of this cyst. Adhesions forming the second and final symptom were due to the bursting of this into the general peritoneal cavity. Perhaps the most interesting feature of the case is that at no time could any particular tenderness or any signs of tumour be discovered in the right iliac fossa. In the first instance the pain was above the umbilicus, and after admission entirely confined to the left iliac fossa, rendering the diagnosis of appendicitis wellnigh impossible.

Cysticercus Cellulosæ.—Mr. RATCLIFFE also showed a Cysticercus Cellulosæ in the Arm. J. L——, a middle-aged man, who lived largely on pork and bacon, came up complaining of a small swelling, about the size of a large hazel nut, on the inner side of the biceps muscle of the right arm. It had been growing for a year, and had given rise to pain for the last two months. On removal, it was found to be a small cysticercus about half an inch in diameter.

Imperforate Anus with a Penile Fistula.—Mr. Heaton showed an infant on whom he had operated for the relief of imperforate anus with a penile fistula. The child, an otherwise healthy male infant, had on the under surface of its penis, about three-quarters of an inch from the end of the glans, a small fistula, from which for the first few days of its life a constant discharge of meconium took place. The anus appeared natural, but on examination was found to lead into a blind cul-de-sac. The rectum was found about three-quarters of an inch from the end of the anal cul-de-sac. It was opened and its mucous membrane stitched to the edges of the skin incision. The opening of the fistula into the rectum was on its anterior surface about half an inch from the blind end. The fistula had no connexion with the urinary passages. Since operation the child had gained in weight, and at present there was no tendency to contraction of the newly made anus.

Mr. HEATON read a paper on Anæsthetics.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

TUESDAY, FEB. 6TH.

ROBT. MERCER, M.R.C.S., President, in the chair.

MR. ALTHORP showed a patient recovering from Compound Comminuted Fracture of the Patella.

Auto-infection in Scarlatina.—Dr. BATES read notes of a case of apparently typical Scarlatina in a girl of nineteen, who, having complained of slight joint pains at the end of the first week, was apparently in the course of convalescence when the temperature ran up and the typical rash again appeared. On the fourteenth day the urine was albuminous, with blood and casts present; on the seventeenth some erythema nodosum appeared; on the twenty-first day the rash came out again, and after this the fever abated. On the thirty-fifth day the urine became scanty, and œdema of the face appeared. Hot-air baths re-established diuresis; desquamation continued until about the eightieth day. He was at a loss to account for the symptoms except on the hypothesis of auto-infection.—Drs. Carter, Burnie, Rabagliati, and Johnstone criticised the case.

Antipyrin in Asthma.—Dr. BATES read notes of two cases in females. In one abortion had occurred from the severity of the attacks. Local measures and arsenic, pushed to the extent of a drachm of the liquor in the day, had been useless. A large dose (twenty-five grains) of antipyrin gave the first relief for months. Both cases had relief now under continued treatment with antipyrin.

Hæmatocele.—Dr. GOYDER read a paper dealing with the Pathology and Treatment of Pelvic Hæmatocele, especially the later stages. He dwelt on the obscurity of the diagnosis occasionally, and advised medical rather than surgical treatment for the majority of cases.—Mr. HORROCKS strongly advocated surgical treatment; the medical treatment he regarded as trifling.—Dr. JOHNSTONE mentioned three cases treated expectantly, in each of which an ovum

was found post mortem.—Messrs. Carter and Burnie also spoke.

Tumour of Optic Thalamus.—Dr. MAJOR showed preparations and specimen, and read the notes of the case of a single girl aged twenty-three. Four months prior to admission she had pains in the left temporal region, worse at night. She could read perfectly, but noticed that on looking at two people she only saw the left one. Two months later she sought treatment for her sight; one eye was hemiopic. Five weeks later she suddenly lost power in right arm, leg, and side of the face. There was some numbness of the right side and thickness of speech, but no aphasia or loss of consciousness. She regained power to a great extent, and three weeks later had a similar attack, from which she was recovering on admission, when she was bright and intelligent. Temperature a little raised. Right pupil dilated; no optic neuritis, no colour-blindness. Right synonymous hemiopia, paralysed muscles, flaccid. Diagnosis, tumour of posterior part of left optic thalamus pressing on posterior limb of inner capsule. Iodides were given. The fever increased, delirium commenced, then prolonged stupor and death. Post mortem, some meningitis, left optic thalamus distinctly enlarged, and on section the posterior part contained a rounded, firm, slightly greenish-coloured tumour, which pressed on the posterior portion of the inner capsule. The structure was not typical, microscopic examination showing nests of large ill-defined cells embedded in a fibrous tissue.

PLYMOUTH MEDICAL SOCIETY.

SATURDAY, MARCH 12TH.

Mr. T. LEAH, President, in the chair.

MR. WALTER WOOLLCOMBE showed a case of Double Congenital Dislocation of First Phalanges of Thumbs forwards into Thenar Eminence. The phalanges, especially of the right hand, were very poorly developed, and the thenar eminences entirely wasted. The patient, a man aged forty-one, was a tailor, able to work well till lately, when he had suffered from "sewing cramp" in the first and second fingers. He presented a curious deformity of back—the upper sacral and second lower lumbar vertebræ presenting extreme bulging posteriorly—prominence covered by tuft of long hairs—spina bifida occulta (Sutton), and a compensatory curve forwards of the lower dorsal vertebræ very extreme, so that a deep fissure existed between the erector spinæ muscles.

Mr. A. RENDLE showed a Gall-stone of unusual size passed per anum by a stout woman, aged forty-nine. Severe colic for three months, with slight jaundice; melæna; hæmatemesis on two occasions. A large inflammatory mass could be felt in the neighbourhood of the gall-bladder. Exact size of stone, 1·8 in. in length, 1·2 in. in breadth; weight just over three drachms. Mr. Rendle remarked that he could only find records of two doubtful cases exceeding this in size, and two others where hæmatemesis was noted as a symptom.

Mr. WM. SQUARE opened a discussion on the Relative Values of Temperatures. After describing the thermometer as first introduced, and the improvement in late years, he emphasised the fact that external circumstances have little or no effect on the internal body temperature, and cited some common causes of a raised temperature where no lesion could be found. The amount of temperature was equal to the amount of tissue metabolism in excess of normal. He next raised the question of the value of drugs simply to bring down the temperature in such diseases as typhoid fever; in his opinion they were of no use. He cited 110° as the highest temperature consistent with life, and concluded by discussing the hyperinosis theory.

Mr. H. S. THOMAS showed the following charts:—1. Acute Rheumatism, in which each rise above the average coincided with fresh joint pains, and *vice versâ*. 2. Third Week of Typhoid, in which fall of temperature was interrupted by occasional rises, each accompanied by either diarrhœa or fresh spots. 3. Acute Pneumonia, temperature falling on seventh day; rise after reaching normal, coincident with serious symptoms, although no evidence of fresh consolidation could be found. 4. Acute Epididymitis, with heart murmurs, varying much in intensity, in which the temperature rose every evening between 2 and 10 o'clock to 102° or 103°. Quinine was useless; ulcerative endocarditis was diagnosed. 5. Tubercular Arthritis of Ankle. Temperature 103°; collection of pus let out; temperature fell for the week, then rose again. Amputation. Temperature kept up, although stump looked well; probably deep and extensive thrombosis. 6. A Case of Lupus, in which chloroform was given for scraping. Sudden collapse; artificial respiration &c.; on recovery temperature was 101°. One hour later it had dropped to 98°, and then remained normal.—Mr. WILLOUGHBY thought that in acute rheumatism, lobar pneumonia, and affections of the pons where the temperature reached 106° or 107°, the temperature alone should be treated by drugs, irrespective of the disease. The most effective treatment was cold baths, and the patient should be removed before the temperature had fallen as low as desired, as it continues to fall after removal.—Mr. A. RENDLE would go further than the last speaker, and sponge whenever the temperature reached 103°. No harm ever resulted.

Rebiews and Notices of Books.

The Anatomical and Histological Dissection of the Human Ear in the Normal and Diseased Condition. By Dr. ADAM POLITZER. Translated from the German by GEORGE STONE. London: Baillière, Tindall, and Cox. 1892.

THIS work gives in detail various methods for the anatomical investigation, coarse and minute, of the various parts of the ear in health and disease. The book is very thorough, entering into all the minutiæ in the most complete manner. The first part, which comprises six chapters, deals with the naked-eye appearances of the various parts of the organ of hearing, the removal of these from the body, the making of sections through them, and the description of elaborate and complicated dissections to display their appearance in the normal state and otherwise. The second part deals in detail with the histological methods most in vogue among pathologists and anatomists who especially investigate the organ of hearing. This part of the work is most instructive, and contains all that is new and important in connexion with the examination of the complicated structures with which it deals. The translation is, on the whole, very readable, and Mr. Stone may be congratulated on having executed his difficult task well. The work is illustrated by 164 illustrations and one woodcut.

The laborious investigations of Toynbee in the pathology of the organ of hearing did much to place aural surgery upon a scientific footing. True advance in this subject can only be hoped for by increased knowledge of the physiology and pathology of the complicated inner ear. Anyone reading this book will at once see that it forms a most valuable guide to the would-be dissector and pathologist. The reader will also be somewhat dismayed at the great amount of labour, time, and close attention that must be bestowed without stint by him who would become an expert in, or advance, aural pathology. The work, indeed, is a powerful argument for the subdivision of labour in modern pathological investigations, and shows us that in this country we are somewhat behind our German *confrères* in the minute investigation, post mortem, of cases of deafness. What has been said of this book is sufficient evidence of its extreme value to any worker in aural pathology. Its study becomes a necessity, for it stands unrivalled. It should form part of every hospital library and be in the bookcase of all those who wish to investigate diseases of the ear by the light of post-mortem examination.

Traitement des Maladies de la Peau. Par le Dr. L. BROCQ. Paris: Octave Doin. 1892.

THE fact that a second edition has been called for in eighteen months shows that this valuable work of the new French school has met with the appreciation of those for

whom it was intended. It only remains for the critic to point out in what way this edition differs from its predecessor. In the first place, *mirabile dictu*, the number of pages is reduced from 925 to 894, and that, indeed, although the author has added a chapter on those surface diseases of the tongue which most frequently come in the way of the dermatologist, such as leucoplakia, black tongue, the mapped tongue, or, as he calls it, "desquamation marginée aberrante," glossodynia, and superficial glossitis. While there is some reason for this notice of surface tongue affections, it is rather surprising to find several forms of vulvitis described in a work on diseases of the skin. The articles on eczema and lichen have also been extended, and there are new articles on actinomycosis, glanders and farcy, *maladie pyocyanique*, or skin lesions consequent on the presence of the bacillus pyocyaneus, parakeratosis, syringomyelia, &c. Although these new articles are short, yet they are additions; and how, then, has the reduction in size been effected By an improved eclecticism as regards the remedial measures suggested, the first edition having been overloaded with formulæ, to the embarrassment rather than to the assistance of the practitioner. The result is an undoubted improvement in the work; but we are not sure that it might not have been carried a little further still. Dr. Brocq has very wisely, too, had all his formulæ made up by an experienced pharmacist, so that those who consult his work may rely on the formulæ being composed on sound pharmaceutical principles. The work can therefore be advantageously consulted for French methods of treatment by all practitioners who are familiar with the language, and the alphabetical arrangement will facilitate their search. Some of the formulæ, such as that for the useful emplastrum Vigo, with its twelve ingredients, will astonish English readers; but they are only relics of ancient pharmacy, which experience has proved to be useful, and with regard to which no one in this age of bustle has taken the trouble to separate the wheat from the tares.

A Report of an Investigation into the Causes of the Diseases known in Assam as Kala-Azár and Beri Beri. By GEO. M. GILES, M.B., F.R.C.S., San. Sci. Certif. Univ. London; Surgeon I.M.S., on special duty in Assam. Shillong: Printed at the Assam Secretariat Press. 1890

Tea Garden Sanitation. Being a Few Remarks on the Construction of Coolie Lines and the Sanitary Management of Coolies, with Special Reference to the Prevention of the Disease known as Anæmia of Coolies, Beri-beri, and Anchylostomiasis. By GEO. M. GILES Surgeon I.M.S. Shillong: Assam Secretariat Press. 1891.

THE first of these publications is a scientific report of a very carefully conducted and interesting investigation by Dr. George M. Giles, and the second gives the practical results of that investigation in a popular form for the use of non-professional persons and the managers of tea gardens in Assam. The report, illustrated with several plates, begins with a comparison between the disease observed in Assam and that known as the beri beri of the Dutch colonies of Sumatra and Java, and long ago observed in Madras and described by Malcolmson. Dr. Giles satisfactorily demonstrates that the so called beri-beri of Assam is a totally distinct disease, however, marked by dyspepsia, anæmia, subnormal temperature, dropsy, and debility, and without any necessary connexion with any specific peripheral neuritis or disorder of the nervous system. It corresponds with the endemic parasitic anæmia observed at Ceylon, but not with the beri-beri of nervous origin. The beri-beri, or Kala-Azár, of Assam is due to the Dochmius duodenalis inducing a diseased condition, for which Dr. Giles proposes the term "anchylostomiasis." He shows by his researches into the life-history of the parasite that it is not in water, but in human excreta exposed to the air, that the ova of the entozoic worm find their nourishment and pass through the several stages which fit them again for a parasitic existence. The number of ova found in the dejecta of the subjects of anchylostomiasis is immense. The subsequent changes, the production of swarms of minute nematoid embryos, and the transmission of the disease in connexion with the habits of the natives, are all very carefully traced out and set forth. The author's labours are likely to be attended with great practical benefits, for, as he points out, there should be no difficulty in removing the source of the disease by a proper system of conservancy and sanitation, and he discusses very fully and practically the preventive measures necessary to that end. The mortality from this disease in the tea gardens and villages is very great, and every effort should be made to carry out the practical remedies indicated by the author of these excellent reports.

Dissection Guides By THOMAS COOKE, F.R.C.S. Eng., B.A., B.Sc., M.D. Paris. London: Longmans, Green, and Co.

THE author is well known for his systematic arrangement of the facts of human anatomy and for the methodical manner in which he has successfully imparted instruction in a long series of years. "Dissection Guides" forms a useful volume, containing the result of much careful practice and knowledge. The object of the book is to make dissecting a fascinating pursuit. Under the guidance of proper instruction there is no subject of the whole medical curriculum which excites so much enthusiasm in the student. Mr. Cooke points out correctly the causes of that vexation and disappointment which in the case of the student of anatomy lead to destruction of "parts," render the attainment of knowledge imperfect and out of ratio to the time spent in its pursuit, and eventuate loss of zeal, and finally distaste for the study. With a good teacher this to the student would be impossible. It generally arises from wrong methods on the part of the instructor. The keynote of the book is struck in the following sentence:—"But for repeated dissections to be possible in the present congested state of the medical curriculum the student must learn to dissect, both efficiently and without loss—i.e., unnecessary expenditure—of time; he must learn to dissect well and quickly." The author's endeavour is to teach the student to do this, and there is no doubt that by following the directions laid down in the volume this power will be attained. Specially valuable is such a work to students who have dissected the parts already, but who are working for the higher examinations and require to refresh their knowledge. We notice with pleasure the author's views on the subject of pictorial illustration in the teaching of this subject. Drawings on the blackboard and elsewhere, when properly executed, are undoubtedly an aid to the apprehension and recollection of an intricate subject. But there is no occasion, whilst using such helps, to give them the main prominence. The book aims at benefiting the industrious student, at teaching him to dissect efficiently, and to obtain a practical acquaintance with the structures of the human body, which will stand him in good stead in his career as a surgeon. It will be found to be practical from beginning to end.

OUR LIBRARY TABLE.

Transactions of the Ophthalmological Society of the United Kingdom. Vol. XI. Session 1890-91. With List of Officers, Members, &c. London: J. & A. Churchill. 1891.—The eleventh volume of the Transactions of the Ophthalmological Society contains some valuable contributions to ophthalmic science. Foremost among them is a most lucid

and complete description of the glands of the ciliary body, with excellent photo-micrographic figures by Mr. E. Treacher Collins. The demonstration of these glands was rendered possible by the ingenious device of bleaching sections by means of chlorine, and the result is a most valuable addition to our knowledge of the histology and pathology of that part of the eye. The discovery is so entirely in accordance with the rest of our knowledge and anticipations that it may fairly be regarded as the keystone which completes the subject. The same author describes and figures a very remarkable case of rupture of the posterior capsule of the lens and one of implantation cyst in a shrunken globe. Mr. George A. Berry has some rather abstruse papers on the connexion between accommodation and convergence, and on latent lateral deviation of the eyes. Some exceptional cases of hemianopsia in which the condition of the brain was investigated post mortem are supplied by Messrs. Swanzy, Werner, and Williams. The above, with some other cases of interest and variety, make up a very good volume, which contains in addition the President's address on the work and events of the previous year and the Bowman Lecture delivered by Mr. Hulke. The coloured plates and figures are quite up to, if not beyond, their usual excellence.

Contributions to Practical Medicine. By Sir JAMES SAWYER, Knt., M.D., F.R.C.P. Lond, F.R.S. Edin., Consulting Physician to the Queen's Hospital, lately Professor of Medicine in Queen's College, Birmingham. Second Edition, Revised and much Enlarged. Birmingham: Cornish Bros. 1891.—The appearance of a second edition of this volume of medical essays, whilst it testifies to the popularity of the work, affords an opportunity of revising the original writings and of introducing two new essays—one on the treatment of gastralgia, the other on the use of ether as a menstruum in medication by the skin. The additions are quite in keeping with the rest of the work, being lucidly and agreeably written, and conveying much practical information. The volume affords excellent reading, and is well printed on good paper with a liberal margin.

The Pathology and Prevention of Influenza. By JULIUS ALTHAUS, M.D., M.R.C.P. London: Longmans and Co. 1892. — This *brochure* consists of the paper (amplified) which the author read before the Medical Society, and which was published in our columns. The argument, it may be remembered, was in support of a theory of influenza being due to a specific poison which acts especially on the nerve centres. There is much to be said in favour of this view; but we hardly think that the reasons adduced in support of the protective power of revaccination are convincing enough to be accepted. Whether we are destined to have another visitation of the disease or not, Dr. Althaus's contribution will remain as a clear exposition of some of the most striking of its phenomena, which may be helpful towards a truer conception of its nature.

The Hydropathic Establishment and its Baths. By ROBERT OWEN ALLSOP, Architect. London: E. & F. N. Spon.—This work contains a description of all the various kinds of bath employed by the modern hydropathist, the Turkish bath excepted, the author having treated that subject in a former work. This volume is addressed partly to architects and partly to the medical profession. The author hopes that "physicians of other schools than hydropathy will accord a not unkindly welcome to a work that at the worst may tend to promote that cleanliness which we are told is next to godliness." The practical requirements of the hydropathic establishment are fully considered and some existing institutions described. Vapour baths, the Russian bath, the douche, massage and electrical treatment, pulverisation, and the Mont Dore methods, inhalations, the "pine cure," the sun bath, &c., all receive adequate attention. Numerous illustrations and plans of the various forms of bath increase the value of the work. Into details of this kind we cannot enter, but we have tested Mr. Allsop's work at many points, and always with a satisfactory result. As regards the general system of hydropathy, the author remarks: "It is a great thing to rid oneself of the notion that baths of all kinds are merely aids to cleanliness of the visible portions of the human economy. Every bath has some therapeutic property, and this over and above its mere cleansing powers. In medical parlance, it may be derivative, stimulative, sedative, alterative, or tonic. The chief end of scientific bathing is to stimulate the functions of life by assisting the wasting of tissues and by aiding the recuperative and regenerative forces of nature."

California; its Life and its Climate. By AN ENGLISHMAN and AN ANGLO-CALIFORNIAN. London: W. W. Gibbings.—This anonymous pamphlet is meant mainly for intending emigrants, and deals chiefly with such topics as the cost of land in California, the cost of clearing the land, the products that may be grown, the price of labour, cost of building, &c. As regards the cost of living in California, we are informed that "beef and mutton cost 5*d.* and 6*d.* per lb. A whole salmon costs 3*s.* to 4*s.* Wine is cheap; an excellent claret can be had for 6*d.* per bottle. Oysters are cheap, and game may be had for the shooting. Groceries are somewhat dearer than in England." White labourers receive two dollars per day, and domestic servants about twenty dollars per month. As regards climate and health, the writers say: "Anyone who, for profit or for health, is seeking a new home might well consider the advantages and charms of residence in a land where roses, geraniums, and many other flowers bloom the whole year round, and where the climate is one eternal spring, whose enlivening and exhilarating sunshine and air send the blood coursing more briskly through the veins and lighten one's spirits."

"THE SMOKE NUISANCE."

To the Editors of THE LANCET.

SIRS,—The report of your Sanitary Commission on the smoke question is of especial interest at the present time, as a Bill, introduced by Lord Stratheden and Campbell, to give the vestries power to compel householders and hotel keepers to make some provision for the abolition of smoke, has recently passed the second reading in the House of Lords, and the Bill is supported—as for many years it has been—by the Duke of Westminster. Although London will always be subject to fogs, it is a disgrace to civilisation that no efficient legislative attempt has been made to eliminate the tons of soot held in suspension in the atmosphere whenever fogs appear. It has been suggested that the presence of soot may act as a germicide, and therefore, in a sanitary sense, may be beneficial. This suggestion is, of course, the greatest rubbish. The truth is that hundreds of lives are lost annually from bronchitis and other chest diseases as the result of breathing this irritating compound. Again, thousands of pounds are lost yearly through interruption of business caused by the black pall which often enshrouds London for days, and this great capital, which ought to be one of the finest cities in the world, has become a by-word of reproach and a place to be avoided during certain seasons. Again, our finest public buildings and statues become dirty and begrimed, and the whole city shows the impress of its murky atmosphere. I therefore venture to ask you to continue to lend the weight of your scientific research in assisting to pass the Bill which I have referred to. It proposes no drastic or impracticable measures. It simply confers powers on the vestries to frame regulations for the abolition as far as possible of this black scourge. I am quite aware that in the present state of our knowledge no definite plan of action can be laid down, but when it becomes illegal to poison the atmosphere with smoke I believe that before the dawn of the next century, now rapidly approaching, scientific research and practical experiment will do much to mitigate this scourge.—I am, Sirs, yours obediently,

THOS. BOND, F.R.C.S.,
Member of the Sanitary Committee of St. Margaret and St. John's, Westminster.

April 12th, 1892.

THE LANCET.

LONDON: SATURDAY, APRIL 23, 1892.

MUCH allowance is to be made for a Chancellor of the Exchequer who, finding himself unable to make any very satisfactory or startling announcements, tries to add to the interest of his budget statements vague and general reflections on the profitableness of particular professions or the wealth and comfort of their members. We are not disposed to be very hard on Mr. GOSCHEN for his recent and remarkable comparisons of the income of medical men and cotton spinners respectively and of lawyers and coal owners. We will let him off, but on one condition only—namely, that he shall descend to some rough particulars. We do not forget that before making these comparisons he had the wisdom to disclaim any intention of descending to detail. "I will not be so indiscreet as to place figures before the committee with reference to the aggregate profits of various trades and professions, but I have examined some of these proportions and they are most interesting." Mr. GOSCHEN thereupon made the famous statements about the lawyer in his quiet office and the doctor in his sombre study getting together taxable profits which do not make the outward show of the manufacturers, who employ a thousand men, but which, nevertheless, form a handsome and regular contribution to Schedule D. "The ubiquity and steadiness of these professions compensate for the lower scale of gain which they may be presumed to earn." Mr. GOSCHEN'S immediate justification for any such comparisons was in the argument that these happy incomes were independent of the vicissitudes of the general trade of the country, that whatever the suspension or abatement of the profits of the great manufacturers caused by strikes, or seasons, or fashion, or legislation, the gains of the professions went equally on as if they came from heaven. But we take leave to demur seriously to this proposition. The colliery surgeons could tell Mr. GOSCHEN differently—that while a strike rather increases their work, it stops their pay. It is self-evident that the incomes of the professions must depend largely on the general prosperity of the country, and it is certain that the incomes of medical men do eminently so depend. It is notorious that the medical man is the last creditor to be paid, that he is at everybody's call, and that he is supposed to be under some divine obligation to work without pay, or even the prospect of pay. The medical man's profits "ubiquitous and steady"! This reads more like satire than fact; but we shall forgive Mr. GOSCHEN if he will favour the House, and through it the public, with the real and the whole facts of the case. We know Mr. GOSCHEN to be a fair and just statesman, who would not willingly use his high position to injure or misrepresent any class of the community. We submit to him that in the unfortunate comparisons he has made he has done the medical profession great injustice. They will tend to make the public more than ever careless about their remuneration of medical men, and they will convey to them a most false impression of the wealth that is to be realised in it. That the whole profession makes a handsome and regular contribution to Schedule D only shows that the profession is conscientious in its returns. But it shows actually nothing of the general condition of its individual members. There are on the Medical Register of the United Kingdom 29,555 persons. Will Mr. GOSCHEN tell us what proportion of these pay under Schedule D; how many do not pay at all; and, roughly, on what sums they do pay? They themselves are ubiquitous. They live on mountains, on the sea, in remote villages, in the humblest parts of cities and towns, in the poorest districts. The income represented by Mr. GOSCHEN'S "handsome and regular contributions" has to be divided among all these persons, whose education has been costly, who have disproportionate expenses of living, and whose calling is perilous to life, and hard and exacting to a degree not true of any other calling. It is scarcely fair of Mr. GOSCHEN to tickle the ears of the public with statements so misleading. The poverty of the profession is abundantly testified. The State exacts much from medical men and it gives little. It exacts high education and high conduct. It affords them little or no protection. It gives them no prizes. It should at least refrain from misrepresentation of the very returns they themselves make. The income of a medical man often barely suffices for his current expenses, and it ceases with his uncertain and perilous life. It is a rare exception for him to leave anything that can be called a fortune. The average income of medical men is probably under £300 a year. It is from a profession so situated that Mr. GOSCHEN takes "handsome and regular contributions" with an air of satisfaction and confidence, and of which he speaks with flowers of rhetoric which excite laughter in the House. We venture to think that very different effects would have been produced if Mr. GOSCHEN had given the particulars of the case. The public is kept in the dark on these questions; it is entitled to more information. It should be possible to procure reliable data in detail from public offices, and it is to be hoped that some medical Member of Parliament will take occasion to ask Mr. GOSCHEN for the details we have indicated. Meantime let no misguided youth or his parent conceive of the medical profession as one even of the tributaries of the river Pactolus, to which anyone may come for the mere gold it will produce. It will yield many things: Work and care and even honour and self-satisfaction—but gold is not one of its rewards. The other features of the Budget need not detain us. We rejoice that the rush to alcohol has ceased. We rejoice in any proofs in the public revenue that the British workman has the unselfishness to abate his own huge expenditure on drink and even tobacco, before abating that on tea and other comforts of his wife and family. We cannot but regret that it is impracticable to reduce the burdens of public taxation, especially in the case of those to whom Mr. GOSCHEN confesses, in terms to which we must take the strongest exception, the obligations of Chancellors of the Exchequer.

WITHIN the last few months several very important coronerships have been rendered vacant by death. The first was that of the borough of Birmingham, which had

been held by the late Mr. HAWKESLEY, a solicitor, since the death of his predecessor, Dr. BIRT DAVIS, who held it for a period of thirty years. The hasty election which a literal compliance with the law would have involved was averted by the temporary election of the deputy coroner for the county up to a certain date, when he resigned, as had previously been arranged. Meanwhile, the respective merits and demerits of medical and legal coroners had been duly discussed, the result being the election of Mr. OLIVER PEMBERTON, our well-known *confrère*. Shortly afterwards the city coroner for Liverpool died most unexpectedly at the comparatively early age of sixty-four. The mayor, aldermen, and city councillors of Liverpool, having had no experience of medical coroners, and being evidently prejudiced in favour of a legal candidate, made the election in ten days and, according to the local press, on strictly party lines, the Conservatives supporting Mr. SAMPSON, the present coroner, the Liberals Mr. LYNSKEY. During the course of the election, however, Mr. F. W. LOWNDES, surgeon, received twenty-three votes. This was the only occasion—out of the three elections for coroner which have occurred in Liverpool since it became a municipal corporation—on which a medical candidate has received any support at all. Since then the respective merits of medical and legal candidates for the office of coroner have been fully and fairly discussed in two of the Liverpool daily papers, which circulate largely throughout Lancashire, Cheshire, and Wales. The ice, therefore, which was broken at the election has been dispersed in all directions, and it is gratifying to note that a legal coroner, Mr. THELWALL of Wrexham, has been sufficiently magnanimous, as well as right-minded, to elect for his deputy Dr. EDWARD DAVIES of Wrexham. This gentleman has for over thirty years made nearly all the post-mortem examinations for the present coroner, and given evidence in his court in a large number of cases. He has also been consulted by him in cases of doubt or difficulty in which the necropsies have been made and the medical evidence given by other medical witnesses. This recognition of Dr. DAVIES' peculiar fitness for the duties of the office is a good example which other legal coroners will do well to follow. Continuing the list of vacancies, we come to Chester, whose late city coroner, Mr. TATLOCK, a solicitor, died early in the year and was duly succeeded after ten days' interval by Mr. BRASSEY, solicitor. It is somewhat surprising that no medical candidate of sufficient standing and influence came forward to secure the support of the City Council, more especially as Mr. HENRY CHURTON, surgeon, who has held the office of coroner for the Chester district of the county for over fifty years, has during the whole of that time resided in Chester. Such an omission is probably explained partly by the short interval which elapses between the death of a coroner and the election of his successor, and partly by the greater influence which members of the legal profession often have with city councillors.

Another vacancy has now occurred by the death of Mr. W. CARTER, coroner for the Newington district of Surrey. For some time past he has been unable, from his great age and feeble health, to discharge the duties, which were accordingly carried out by his deputy, Mr. PERCIVAL WYATT. It is most desirable, in the interests of the public, that for this important appointment a thoroughly well qualified medical candidate should be found, that he should receive the loyal and hearty support of all his professional brethren, and through them that of the majority of the County Council with whom the election will rest. Of the 298 coroners in England and Wales whose qualifications are known—247 have legal—only fifty-one have medical qualifications. In other words, five-sixths of the English and Welsh coroners have no medical training, while those who have this most essential requirement for the office of coroner only number fifty-one, or one-sixth. How is this anomaly to be accounted for? The arguments in favour of legal coroners rest upon the flimsiest basis, which only requires exposure to show its utter hollowness. Many who support a legal coroner do so for the feminine reason "because they do;" this is at least the only reason they can give. Others give the more logical reason: because by the Municipal Corporations Act the deputy coroner must be a solicitor or barrister. But even this weak argument does not apply to coroners, either municipal or county, who both may be, and are, members of the medical profession. Nor does it apply to deputy county coroners, who may also be medical men subject to the approval of the Lord Chancellor. The last and strongest argument in favour of a barrister or a solicitor for the office of coroner is that he may be able to explain points of law, should these arise, better than a physician or a surgeon. But this argument will not bear the test of reasoning. Judges, recorders, and stipendiary magistrates are chosen from the ranks *of* those who have performed the routine duties of the courts in which they are subsequently called upon to preside, and a barrister can with confidence assume such judicial duties, he being in a sense "to the manner born." To try criminals or causes, to decide important points of law, these are essentially legal duties which any barrister may prepare himself to undertake eventually. The coroner's court is, however, totally different from any of the courts we have named. It is a court *sui generis*. The legal part might, according to Mr. WAKLEY, the first medical coroner, be learned in one day. According to Dr. LANKESTER, two hundred and ninety-nine out of every three hundred inquests involve no point of law, and the remaining one only points which a medical coroner can easily decide. A legal coroner necessarily comes to the duties of a coroner a veritable "fish out of water." The viewing of the body must be a mere form, and the technical medical evidence for the most part incomprehensible. Contrast this with an experienced medical practitioner, an old hand at attending inquests and making post-mortem examinations. The viewing of the body is to him an important medico-legal duty, for which he has been preparing himself ever since he first entered the dissecting-room years and years ago. Taking the evidence of witnesses upon oath as to the cause of any individual death is a simplified version of what he has been doing for many years past under much greater difficulties. The signing of burial and registrars certificates are quite in his way, while the oath administration to jurors and witnesses is so familiar to his ear from constant repetition that he scarcely requires to have the words before him. The office of coroner has always had its

quasi-medical aspect, but it will be greatly improved if it be regarded as a purely medical appointment. Why should not this be so?

The number of offices open to members of the bar, from that of Lord Chancellor down to that of Revising Barrister, is legion. Very numerous and lucrative also are the appointments open to solicitors from town and city clerks to those of clerks to the board of guardians. This office of coroner is the solitary one not absolutely medical which is open to members of the medical profession, and then only after a keen contest against a legal candidate. In Ireland and Wales the medical coroners are in greater proportion than is the case in England. Is it because the medical profession is more respected in the Principality and the Emerald Isle? When Mr. WAKLEY first held office he was the only medical coroner; since then his seat has been held by three medical successors, the legal candidate being in a minority on each occasion. Two other Middlesex coroners are medical men, and, as we have seen, the total number is just a unit over fifty. That which one man has done another man may do, and all that is required to secure these offices for the medical profession is that the profession should be true to itself and assert its claims. For every vacancy which is likely to occur a suitable candidate should be found ready against the surprise of a ten days' election. The chosen candidate should have the loyal and hearty support of all brethren. In this way we may hope to see each vacant coronership as worthily filled as was that for Birmingham a few months ago.

PROFESSOR CHRYSTAL'S graduation address on the 14th inst. at Edinburgh was memorable, not only in itself as a model of what such addresses should be, but also for the circumstances in which it was delivered, and for the remarks to which these gave rise. It was the last occasion on which the old Arts curriculum appeared on the academic stage before retiring in favour of its successor as framed under the new ordinance. As the representative of the superseded system, Professor CHRYSTAL could obviously have said more in its favour than he did—could have dwelt on the "excellent service" it had done, not only for Scotland, but for other parts of the empire, whose youth availed themselves fully of its advantages. But from this he wisely refrained, and passed on to forecast, in a prudent, but by no means pessimistic, spirit, the curriculum that is henceforth to take its place, until it in turn has to be modified or superseded by another yet more in harmony with the ever-changing requirements of humanity in evolution.

The Arts curriculum in the Scottish Universities owes its death to two causes: first, the increased efficiency with which at least three out of its seven subjects—Latin, Greek, and mathematics—are taught in the preparatory schools; and, secondly, the claims of other subjects to academic notice in lieu of the remaining four—logic, ethics, natural philosophy, and rhetoric. Young men now come up to the University with a classical and mathematical equipment almost equal to that with which the Bachelor or Master of Arts a generation ago left its halls; while the field of science has been so enlarged that it has forced into the area of academic recognition subjects indispensable to the professional man in general and to the medical man in particular. Thanks to improved methods of teaching and improved text-books, the standard of proficiency in Latin, Greek, and mathematics with which the student now enters the University is so much higher than formerly that the time he used to employ in getting from the professor the knowledge he should have got from the schoolmaster he can now devote either to the prosecution of these subjects on a superior plane, or to the cultivation of others for which he has more aptitude, or which, with a view to his future profession, he can turn to better account. He can, if he chooses, become a better scholar in the old Arts subjects than he used to be; or, while possessing a higher proficiency in such of these as are still considered essential, he can select from the other subjects by which the Arts curriculum has been supplemented those which will be most useful to him in his calling in life. He can graduate in sciences which have a direct bearing on his professional career, and, if that be the medical, he can so train himself in these as to make professional study at once easier, more thorough, and more conducive to practical results. A great improvement this on the old system; but not without dangers of its own, to which Professor CHRYSTAL pointed significantly.

Now that pre-professional graduation has been made so much more profitable for professional after-study, will due advantage of it be taken? Will the future medical man be likely, in greater numbers than heretofore, to qualify himself for his career by graduation in Arts—in the improved curriculum now open to him? We hope he will, and Professor CHRYSTAL, with wise words, strengthens the hope. "I think," he says, "the tendency to press young men at once into the business of life is being overdone. It lowers the standard of the professional classes and it aggravates the block in these lines of life of which so much is heard, and which has irritated so many of our educational diseases to the stage of acuteness. Moreover, it is a mistake from the point of view of the individual, for I have noticed with satisfaction that of the few Arts graduates that now enter medicine, for instance, a very large proportion are to be found among those that ultimately distinguish themselves by success in their profession." But to attain this end—that of a more generally cultured, while more technically trained professional order—the qualifying bodies must coöperate; and the Universities themselves must not be tempted to relax the conditions of qualification so as to take in the "miraculous draught" for which some of them have been accused of lowering their nets. On this subject Professor CHRYSTAL might have enlarged with profit, but he contented himself with pointing to a real danger with which the new Arts Ordinance is fraught. As to its general principle, he declines to pass a criticism which experience might, on one side or the other, falsify. "It has been tacitly agreed on all hands," he says, "to give it a trial. I cannot, however, refrain from saying that, after mature consideration, I have come to think that it is of doubtful educational soundness, in so far as it sets up a kind of competition by Dutch auction between the kindred subjects of the old departments. There will, I fear, be a tendency in

the future for passmen to crowd, not to the better or more thorough teacher, but to the more popular subject and the easier-going professor. This will be seen in all the compulsory departments, and in the optional subjects to some extent also." This is a very real and not very tractable danger—so much so that the University Commissioners are, in answer to authoritative representations, devising means by which it may be met. After all, no innovation, however well considered, works with unexceptionable smoothness in its early stages. Experience comes in to correct, modify, and adjust, till drawbacks, suspected or unforeseen, are replaced by better working conditions. Manifold, indeed, are the influences which may be counted on to perfect the academic machine—influences like that spirit of emulation which forms the motive power of all improvement. Edinburgh, even under her extended Arts Ordinance, will never be allowed to forget that she has rivals in the academic field whose efficiency she must cope with, and whose advantages she must counterbalance or outweigh, if she is to maintain the position she has long held as a centre of culture and of professional qualification. It is this honourably competitive spirit her University Commissioners must practically recognise if the not illusory dangers foreshadowed by one of her ablest representatives are to be averted or avoided.

TIME and again this unwieldy piece of legislation, with its 563 clauses, has been before Parliament in the course of the past decade, and as often its admission to the Statute-book has been deferred. The House of Commons will consider the sanitary clauses of the Bill on Monday evening next. In the best interests of public health in Scotland, it is to be hoped that it will meet with its previous fate, or else that the clauses in question will be entirely dropped. Should it pass in its present form, then, as is pointed out in a memorandum issued by the Scotch medical officers of health, Scotland will be in the remarkable position of having two sets of sanitary laws running concurrently—one in the burghs and the other in the rural districts. The former would be under the new Act, and the latter under the Act passed in 1867. It has been suggested in some quarters that the passing of the Local Government Act of 1889 is a reason for withdrawing the objections which sanitarians in and out of Parliament have always felt to the Bill. As a matter of fact the opposite is the case. The counties have now been compelled to appoint medical officers who have to devote all their time to their duties, and surely they have a right to share in any improvements in the sanitary legislation of the country. But it is proposed instead that the new law should be handed over to the local authorities of small burghs who pay their medical officer perhaps £5 a year, while those authorities who have had to appoint skilled and practised officials are to be left with a law in which the chief interest ought now to be felt by the antiquarian. It may be urged that there is no harm in giving the burghs this year that which the counties might get next year. But the *crux* of the case is that giving to the burghs now will delay indefinitely the meeting of the requirements of the counties in the future. It is the burgh members who are anxious to pass the Bill, and if once their constituents are satisfied, it will be many a day before Parliament finds time to attend to the needs of the remainder of Scotland. Surely it would be better, as the Society of Medical Officers suggests, that the Infectious Disease Prevention Act, 1890, and the Public Health Amendment Act of the same year, both of which refer only to England and Ireland, should in the meantime be extended to Scotland, both urban and rural, and that when other legislation is undertaken it should consist of a Public Health Act which would embrace the country as a whole.

It is not our purpose to criticise the various clauses of the Bill as it stands. But if it were desirable that they should pass at all, there would be abundant room for amendment. The provisions with regard to the notification of infectious diseases are in several respects different from those of the Notification Act which is already in force in many of the burghs, as well as in nearly all the county districts. Under the Bill, notification may be made either to the medical officer or sanitary inspector, and to give any such choice in regard to such a matter is, on the face of it, absurd. Medical men are to be paid for notification, "unless it be found that the diagnosis of such practitioner was incorrect." What relations are likely to be set up between three or four medical men in a small burgh when the local authority insists on one of these practitioners revising in every infectious case the judgment of his brethren? Then, again, we find the astounding provision that notification is to extend to "every case of infectious disease *and whooping-cough*." When the local authority of Dreepdaily gets in its first account for a whooping-cough epidemic, it will begin to wonder whether the new Act is not more expensive than useful. And it will no longer have any doubt on the point when it realises that the Act compels it to provide hospital accommodation for its population of 700 or upwards, and at the same time gives it no power to unite for this purpose with the surrounding county district, but only with other burghs which may be many miles away. Section 367 seems expressly drawn up for the purpose of causing friction between burghal and rural sanitary authorities. "Whenever it shall be certified by the medical officer of health ..... that milk is being brought within the burgh from any farmhouse, dairy, or place beyond the burgh in which any person is ill of infectious disease ..... the burgh prosecutor or sanitary inspector shall apply to the magistrate for an order to prohibit the sale of milk so bought," and so on. Surely the supervision of infectious disease in dairy farms might safely be left to the medical officers of the county districts in which the farms are situated. It is true that previously to the passing of the Local Government Act the city of Glasgow obtained powers of this kind by a local Act, but the circumstances are entirely altered now. In the case of a dairyman selling milk—say, in three burghs—the effect of the clause in question would be to place him under the power of no less than four local authorities—those of the three burghs and that of his own district,—and these possibly with divergent views as to the proceedings required to be taken in the presence of infectious disease.

The Bill bristles with objectionable clauses, but space forbids our giving more than the above examples. It is

significant that no single medical voice in Parliament has been raised in its favour, and that it is receiving, at least as to its public health provisions, the active opposition of Dr. CLARK and Dr. CAMERON. It is sincerely to be hoped that their opposition will be successful.

Annotations.

"Ne quid nimis."

THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD.

WE congratulate Mr. Ritchie, the President of the Local Government Board, on his appointment of Dr. Thorne Thorne as the successor of Sir George Buchanan, F.R.S. The wisdom of the appointment of Dr. Thorne as head of the department with which he has been so long and worthily connected will be ratified by the opinion of the medical profession and the public In addition to his long and varied official experience, Dr. Thorne has made his mark by much excellent and original etiological work. He is a Fellow of the Royal Society, a Bachelor of Medicine of London University, and Fellow of the Royal College of Physicians of London, Honorary Member of the Academy of Rome, Lecturer on Public Health at St. Bartholomew's Hospital, and Examiner in Public Health for the Universities of Oxford and London. Dr. Thorne was President of the Epidemiological Society, and was a British delegate to the International Society Conference at Rome in 1885, where he did excellent service. His connexion with the London Fever Hospital and the Royal Hospital for Diseases of the Chest has given him a practical acquaintance with disease and hospital work. Dr. Thorne is well known as the author of various official reports on public health and cognate subjects, one of which we may mention—namely, that on the use and influence of hospitals for infectious diseases. His Milroy lectures on Diphtheria, its Natural History and Prevention, attracted much attention, which was well merited. There is therefore abundant evidence of Dr. Thorne Thorne's qualifications for the post as far as technical and professional culture are concerned, and he has besides the reputation of possessing the tact and good judgment which are so necessary in a public official who has always responsible, and sometimes difficult and delicate, duties to perform.

A TEACHING UNIVERSITY FOR LONDON.

WE have strongly urged on the Government the necessity of appointing one or more eminent medical men to serve on the reconstituted Royal Commission which is now being formed for the consideration of this highly important matter. The question of degrees for London medical students obtainable on conditions similar to those existing in the other centres of medical education is so intimately connected with the wider aspects of university teaching in London that it is quite imperative that representatives of our profession should be included among the Royal Commissioners, and one of the blots in the constitution of the former Commission was the non-inclusion of any such representative among its members. At the same time it is obvious that in such a selection, past and present teachers who have taken a decided line either for or against any of the schemes which have been brought before the Commission or the Privy Council should not be asked to serve, nor should any member of the Senate of any of the other universities which would be affected by a solution of the problem, be selected. The difficulties can only be rightly weighed and estimated by an absolutely impartial and judicious investigation, and it is only by eliminating all persons who might be considered in any sense to have a partisan view that this can be secured. We trust therefore that the rumours that some members of the deputation which waited on Lord Salisbury (in opposition to the Charter of the proposed Gresham University) will be placed on the Commission are incorrect. Sir William Savory and Sir George M. Humphry have been mentioned as the probable medical representatives, but it is obvious that these eminent members of the profession are too closely concerned with two of the bodies which have already taken action in the former phases of the problem to be in these respects fit and proper representatives. Sir W. Savory has served throughout on the Joint Committee of the Royal Colleges which propounded a scheme which was rejected by the Commission; and Sir G. M. Humphry is an active member of the University of Cambridge, which also presented a petition to the Commission, which was taken into consideration. It can surely not be difficult to find members of our profession, not connected with the governing bodies of any of the universities or corporations which have already taken action in the matter, whose position and judgment would carry due weight. From every personal standpoint, and on any other Commission in which medical interests are involved, no more suitable members of our profession could be chosen than the above-mentioned gentlemen.

EGYPTIAN MEDICINE.

So rapidly is our knowledge of ancient medicine increasing that already the chapters devoted to it in such standard works as those of Häser and Puschmann are getting out of date and will have to be rewritten, or at least revised. Chinese medicine, for example, perfunctorily handled by the former of these historians, and completely ignored by the latter, is, thanks to the research of the medical missionary, becoming better known to us every year. Indeed, within the last few months the historico-critical studies of Dr. J. Berendes, one of Germany's most scholarly pharmacists, have shown us how rich was the Chinese materia medica in remedies not a few of which might be profitably reconsidered with a view to their employment in nineteenth-century therapeutics. But it is Egypt that impresses us most profoundly with the wealth of surgical and medical resource enjoyed by her ancient practitioners; and, now that we are on the track of so much literary treasure-trove in papyrus, we may look to the same discoveries that have given us Aristotle's Constitution of Athens and the Mimiambi of Herondas for yet further accessions to our knowledge of how men fared at the hands of the profession in the great Nile Valley millenniums before Christ. The "Papyros Ebers: the oldest Book on the Healing Art," is now a κτῆμα ἐς ἀεί, not only in its original form, but in the singularly painstaking and circumspect translation of it by Dr. Heinrich Joachim of Berlin. To this we shall take an early opportunity of returning; but meanwhile we may draw the reader's attention to another and quite recent discovery in the same prolific field. M. Bouriant, a member of the French Egyptological School of Cairo, in a memoir read before the French Academy, has for the first time given to the world "A Fragment of an Egyptian Medical Work," preserved in Coptic in the so-called Theban dialect. Other portions of the manuscript to which this fragment belonged would, it was hoped, have been discovered, but hitherto the search for the missing portions has been unsuccessful. What we do possess is a strip of parchment, forming one leaf of a manuscript, and con-

stituting pages 214 and 215 of the same. Zoega, in his "Catalogus Codicum Copticorum," mentions four pages of a similar work; but these have not yet been published, and so M. Bouriant's translation of the fragment he himself has found possesses an interest still unique. That translation (into French) is too long to be given here *in extenso*. Suffice it to say that it treats of the female mamma in health and disease. In the former state, when a flow of the lacteal secretion is sought, special drinks and applications are prescribed; and in the latter, when the breast is sore, cataplasms of various kinds are recommended. These bear a strong family resemblance to those already known to us from the "Papyros Ebers" and the historico-critical researches of Berendes; but a specimen in M. Bouriant's French has an interest of its own. "Pour les seins endoloris—s'emploie aussi pour le corps mâle de l'homme—prends la plante nommée 'œil de chat,' de la ceruse, de la litharge, du plomb, et de l'opium en quantités égales; broie-les bien; ajoute un peu de vinaigre; mets (le tout) dans du suc de jusquiame; fais cuire dans du suc de vigne femelle; mets dans un vase du plomb et laisse reposer; frottes-en les parties malades jusqu'à la guérison." Other indications are given as to how to keep this medicament in readiness for use from time to time. The other prescriptions are not less curious, and certainly whet our anticipation for still further additions to what we know of Egyptian medicine. M. Flinders Petrie, we are aware, brought to England recently a portion of a very ancient papyrus containing a book on veterinary medicine, dealing specially with the eye diseases of oxen. This, when translated, cannot fail to be interesting, and will, we hope, lead to yet further discoveries in the veterinary art of the Egyptians, particularly their mode of treating cattle plague on an epidemic scale.

DEATH OF DR. ALLON.

WE cannot but join our contemporaries in a note of grief at the death of the Rev. Henry Allon, D.D., of Islington. Dr. Allon was more than the representative of a leading dissenting body. He was in touch with all religious bodies in that general coöperation for good which is their chief credit. One of the last characteristic public functions he discharged was to fill the chair, after it had been vacated by the Archbishop of Canterbury, at Lambeth Palace, at a meeting for providing summer holidays for poor children. He was from the beginning a promoter of the Hospital Sunday Fund in the Metropolis, was a member of the council of the Fund, was on its General Purposes Committee, and was in every way one of its best friends. He was an effective and dignified speaker either in or out of the pulpit, and was held in high respect by all the earnest men of his time even when they differed from him in opinion.

THE PRACTITIONER'S PARASITES.

FEW medical men of any standing have not experienced at some time or other the importunities of the begging impostor. Now as a poor but unfortunate fellow countryman, now as an invalid, as a dispenser out of work, as a brother practitioner in monetary difficulties, or as representing one of a dozen other phases of distress, he is constantly turning up. He is affable, voluble, pitiable. He comes laden with manuscript recommendations, yet he is evidently devoid of credit. Like the rich, he, though poor, has many friends, and they too as needy as himself, and as willing to avail themselves of the charity which he first scented out. His name is legion, and his modes of "working," as we have seen, show him to be quite a social chameleon in adaptation. We may briefly notice, by way of illustration, two specimens of this class who were charged a few days ago at the bar of Worship-street Police-court. This couple, a husband and wife, were in the habit of utilising the name of some former student of a medical school, supposed to be in bad health and poverty, in order to extract from one or other of his quondam teachers a solid proof of their esteem or pity for him. The appeal was, of course, by letter, and for a time was not wanting in success. Its ultimate consequence, as might have been expected, was their appearance in court. We may hope also that this exposure of their method may convince the less cautious of our medical brethren that a searching investigation is a needful and by no means unhandsome preliminary to the exercise of their generous compassion.

SAD DEATH OF A MIDDLESBROUGH CYCLIST.

OUR Newcastle correspondent, in his letter this week, notes the sad death of a young man aged twenty-two, belonging to Middlesbrough, who had ridden forty miles before he was taken ill on Good Friday last at Great Ayton, in Cleveland, where he died the next morning. The cause of death is said to have been syncope brought about by cold and over-exertion. It appears that this young man was a practised bicycle rider, and to such forty miles could hardly be considered an excessive run in a day; but, besides distance, many things have also to be considered by the judicious rider—for instance, the nature of the roads, the weather, and, perhaps above all, the pace. We know that the new machines are capable of attaining a speed never thought of a few years ago. A high speed through cold air such as prevailed on Good Friday must often be very dangerous, as likely to cause pulmonary congestion, to overcome which the heart will work at a high degree of tension, and, like any other muscle, it is likely to become paralysed from overwork; and herein lies the danger from swift and hard riding. It would be well if our young men would remember the advice that an eminent English physiologist gave to a young man some years ago: "Observe your strength, and keep within it."

QUARANTINE AND ISOLATION AT BARBADOES.

THE Board of Health of Barbadoes have erected a hospital for infectious diseases on Pelican Island, the cause of its erection having been one of those difficulties attaching to the inhuman practice of quarantine when that system is carried out on old-fashioned principles, which, we trust, few would now advocate. According to the *Barbadoes Herald*, the hospital is the outcome of the sad fate of a large number of the crew of the barque *Mozart*, who, one after another, were taken with yellow fever, there being at the time no place whither the hitherto healthy seamen could be removed so as not to be exposed to the infection of their sick shipmates and of the infected vessel itself. But now that the hospital has been provided, the authorities are confronted with a new difficulty. If the hospital is to be generally available for all infectious sick arriving by sea, it is feared that masters of vessels will be careless as to taking infection on board, for they will be able to land them at Pelican Island, where considerable aggregations of the infectious sick may thus occur. The authorities seem to fear that if this takes place danger will arise for the inhabitants. But, apart from aggregations of small-pox in contiguity to inhabited localities, we doubt whether any such hospital as is likely to be provided on Pelican Island stands much chance of doing harm in this way. A somewhat similar difficulty has arisen in our port sanitary districts. Captains and masters of vessels, knowing that at a certain port a hospital exists, enter that port and expect to have cases of infectious diseases taken off, so that they may proceed on their journey without risk. The difficulty with us has been mainly a financial one, for southern ports, for example, do not care to be burdened with the cost of

isolating and maintaining the infectious sick whose destination is London or some other port; and one at least of them has demanded that if they are expected to perform what they term imperial health functions, the State should pay the cost. The attitude is one by no means easy to meet. Every district, in a certain sense, protects others as well as itself, and the line between local and imperial work cannot be drawn in as simple a way as some imagine. But it ought to be possible to charge upon owners of vessels the cost incurred in the removal of the infectious sick from their vessels and in subsequently maintaining them. As yet the patient, who is often a poor sailor, can alone be charged. The Barbadoes question may eventually be solved on some such lines, for it is not likely that, having provided a hospital because of the disaster on board the barque *Mozart*, they will ever run the risk of a similar occurrence so long as beds are available on Pelican Island.

ADMISSION OF MINISTERS TO ISOLATION HOSPITALS.

A DIFFICULT question in Guildford has been raised by the Rev. Reginald Fowler—namely, the right of a Roman Catholic priest or any other minister to visit his people at any time while they are inmates of an isolation hospital. He not only maintains the reasonableness of this rule, but gives letters from the authorities of the Metropolitan Asylums Board and other institutions to show that any clergyman wishing to visit a patient would be admitted. Mr. Fowler writes to the *Surrey Advertiser* complaining that he has been informed by the medical officer in charge that he cannot be admitted to see patients unless they are on the point of death and by his permission. The question is a delicate as well as a difficult one. The committee of the isolation hospital support their medical officer and defend their rule. One remark is obvious, that the question raised is not one of liberty of conscience at all; liberty of conscience is not invaded in the least. The Catholic patient has his Catholic priest, and the Protestant patient has his minister according to his own choice. It is simply a question of expediency. The object of an isolation hospital is isolation—namely, the reduction of the chances of conveying infection. The priest should be admitted whenever necessary, but not unnecessarily. The medical officer should not be rigid in sanctioning the visits of ministers of religion. On the other hand, ministers of religion should not expect the same liberty to visit in an isolation hospital which they have in a private house. Their visit may carry risk to outsiders, it may be injurious to the patient himself, and it may disturb other patients. According to our view, the medical officer of a public institution and the minister of religion should consult together in this matter, and should have no difficulty in safeguarding the interests of all the patients.

A CASE OF SYPHILITIC REINFECTION.

THE following interesting account of what would seem to be an undoubted case of syphilitic reinfection is published by Professor Alexis Pospelow of Moscow. A patient, towards the end of October, 1882, fourteen days after exposing himself to the liability of syphilitic infection, noticed a sore of the size of a lentil in the sulcus behind the glans penis. He was seen by Professor Tarnowsky, who diagnosed a hard chancre, and ordered the local application of mercurial ointments. On Dec. 20th a well-marked eruption of syphilitic roseola appeared on the body, and, there now being no doubt as to the correctness of the previous diagnosis, he was placed under treatment by mercurial inunction. Shortly afterwards mucous patches appeared on the fauces, mouth, and lips, for which iodide of potassium was prescribed; but this produced such violent diarrhœa that its use had to be discontinued. The mercurial treatment was kept up until the end of March, when the rash and ulceration of the throat had disappeared. However, in May he had a troublesome attack of palmar psoriasis, for which he was recommended to resume the inunctions, and to visit the sulphur baths at Piatigorsk in the Caucasus. Upon his return to Moscow three months afterwards, no trace of his former attack could be found. In spite, however, of this freedom from symptoms, he spent the summer of 1884 at Piatigorsk, and resumed the mercurial treatment. In the autumn he again returned to Moscow, and remained under supervision for the next two years. As there was during this period no appearance of any relapse, he was given permission to marry, which he did in 1886. Nine months afterwards a healthy child was born, and both the mother and infant remained in good health during the whole period of lactation. Subsequently he separated from his wife in consequence of matters not connected with his health, and remained so for three years. Unfortunately, towards the end of this period he again ran the risk of infection, and contracted a double chancre at the root of the penis, followed by sore-throat and roseola. The case was seen by several medical men, and was considered to be undoubtedly one of reinfection.

THE PROFESSION IN WALES AND THE GENERAL MEDICAL COUNCIL.

AT the North Wales Branch of the British Medical Association a resolution was unanimously passed approving the principle of a direct representative for Wales in the Medical Council. Mr. Jones Morris pointed out that there were only 800 medical men in Wales, and said it would be somewhat puerile to agitate for a Welsh representation. But Mr. Richard Williams of Liverpool urged the consideration of the question from "a national" point of view, and this naturally carried a Welsh meeting. Put in the form of a problem of mere numbers it could scarcely be seriously argued. For these 800 gentlemen to have one direct representative all to themselves and the 18,000 of England to have only three would obviously be a greater anomaly than the present joint and equal representation of England and Wales. We commend this aspect of the question to our Welsh readers.

GENERAL PARALYSIS IN A BOY.

IN the *Archives de Neurologie* for March an interesting case, apparently of general paralysis of the insane, occurring in a youth of sixteen, the first manifestations of the disease having been at the age of fourteen, is recorded at length by MM. Charcot and Dutil. The boy had been bright and intelligent at school, and had had no previous illness of any significance. He was one of a numerous family, eighteen in all, and of these he was one of three survivors. His father was alcoholic, and had had an attack of alcoholic delirium soon after the boy was born. His family and personal history otherwise presented nothing noteworthy in respect of neurotic tendency. When he came under observation he was found to look younger than his age, the marks of puberty being little apparent, as if his physical development had undergone a somewhat sudden arrest. He had the characteristic, uncertain, awkward gait, but he showed fair capacity for attention to questions. He was, however, manifestly feeble intellectually, and his memory was notably impaired. He also had tremor of the tongue and lips and difficulty in articulating, while the tremor in his hands was marked, and his writing was characteristic. The pupils were unequal, and he was subject to attacks of peculiar sensations in different parts of his limbs, chiefly on the right side. In one such attack

there was well-marked interference with speech function. No exalted ideas were present, but the case presented so many other characteristic features as to leave little doubt that it should be placed in the category of general paralysis occurring at an unusually early age, like several cases already recorded in this country and in France. With reference to the age of incidence of general paralysis of the insane the opinion of Mickle is quoted—viz., that the age at which general paralysis develops nowadays is an earlier one than it was formerly, and that this is the result of a premature senility among individuals, and is a precursor indicative of the decadence of the race. But, perhaps, as is suggested in the paper under notice, it is really a result of our being now able to diagnose the condition when its signs are much less manifest than they had to be before the disease could be recognised in past times.

LADIES' DRESSES AND CONTAGION.

WE have already (THE LANCET, Aug. 22nd, 1891) had occasion to notice the supposed influence of the trains of ladies' dresses in spreading contagion. The matter has been warmly taken up in Vienna and Pesth, and we now learn that a regular crusade has been instituted by the Sanitary Board of Hungary against the obnoxious fashion. It is not to be expected that the justice of this course will pass unquestioned. By very many persons it will certainly be regarded as an instance of the mere enthusiasm of sanitation, having but the slightest foundation in reason or science, and as little connexion with practical cleanliness. There is some room for argument on both sides, nevertheless. Granted that the germs of disease abound in a given quarter, no ordinary means could more effectually ensure their dispersion than the broom-like action of a flowing skirt. On the other hand, it is to be remembered that this very movement implies an admixture of air and oxygenation of the dust-cloud. Then, again, one is tempted to inquire whether a reduction of the length of train is the best method of dealing with this question of germ dispersion by means of street dust. Would it not be better, in combating whatever contagion may linger among its particles, in spite of a purer surrounding air and sunlight, to rely upon the sanitary water-cart or hose and the scavenger's brush? If dress fashions are to be held responsible and forbidden, are the whirl of traffic and the bustle of hurrying pedestrians, though they wear no trailing robe, to be restrained also? We admit a cordial dislike to this latter garment, both on account of its close and clinging unwholesomeness as regards the wearer and on the ground of its public inconvenience. Nevertheless, the surest remedy for infection by means of dust is, in our opinion, rather to be sought in the cleansing of thoroughfares than in the restraint of fashions in dress.

PATHS IN THE CORD.

IN the recently published number of *Brain* an abstract by Dr. David Inglis of Detroit is given of a paper by himself. The paper was read before a meeting of the American Neurological Association, and had for its subject Friedreich's ataxy and its relation to the conducting paths of the cord. Taking Friedreich's own summary of the characters of the disease, in which it is described as a progressive paralysis of the faculty of combination of movements, he reviews the conditions found in the thirteen recorded necropsies. These are a progressive sclerosis always affecting the columns of Goll, also the column of Burdach, but not so completely, and the direct cerebellar tract, with Clarke's column in most, and the crossed pyramidal tract in some cases—that is, the disease is one which affects chiefly the tracts which degenerate upwards. It should be stated, however, that Dr. Inglis does not mention the direct pyramidal tracts, which are certainly degenerated in some cases. He contends that the symptoms of Friedreich's ataxy afford a demonstration that those tracts do not convey sensory impulses upward, for sensation is not impaired, but that they are the main tracts for the conveyance of coördinated motor impulses downward; that their anatomical relations with the medulla, cerebellum, and mid-brain, as well as the facts of Friedreich's disease, agree in showing them to act in coördinating motor impulses of the mid-brain, cerebellum, and higher and lower levels of the cord. The facts of embryology are also claimed as strengthening the theory: for it is stated that the infant is characterised not by voluntary control of its muscles or by accuracy of sense perception, but by an extensive coördination of involuntary motor functions, and that at this time the posterior columns and direct cerebellar tracts are fully developed, while the pyramidal tracts are still undeveloped. Further, it is stated that the direction of Wallerian degeneration is not necessarily the same as the direction of normal physiological impulses in any given tract.

HEALTH OFFICER FOR THE COUNTY OF NORFOLK.

A SPECIAL COMMITTEE has been appointed by the Norfolk County Council to consider the question of the appointment of a county health officer. One of the principal reasons given for this is the need of support to local health officers who have reported as to the housing of the working classes, and the mover of the resolution pointed out that such officers were some of the worst paid in England. A paltry remuneration for health purposes has undoubtedly at times had its cause in a desire that but little should be done which would involve cost to house and cottage owners. But there are happily many ill-remunerated local health officers who are doing their duty in the matter of the housing of the poor, and in Norfolk such officers would doubtless welcome the support of a supervising county officer.

THE HEALTH LAWS OF THE BIBLE AND JEWISH LONGEVITY.

THE *Asiatic Quarterly Review* of January contains a report of a paper on the above subject, read before the Oriental Congress by Mr. Marcus N. Adler, M.A., F.S.S., Fellow of University College, London, in which are set forth in compact form some of the more important points of the Mosaic law which have a bearing on the health and longevity of the Jews. There are certain statements with which those who have studied the subject will not agree; but, on the whole, we find in this article a very compact *résumé*, which, to most minds, will be perfectly convincing. It is difficult to understand why the quantity of gelatine that "pig meat" contains should be selected as one of the points to indicate its special unsuitability for food, "gelatine being a favourite nutriment of morbific bacilli"; most of those who have attempted to cultivate morbific bacilli in "pure" gelatine find that it is a very bad medium. It requires to be specially prepared and diluted before it is of much value. The part it plays in solid culture media is purely mechanical. Then, too, actinomycosis, which is here quoted, can scarcely be looked upon as a disease which leads to much infection amongst human beings. A very interesting part of the paper is a table drawn from the American returns, in which is given a comparison between the death-rate amongst Jews and that amongst the general population from phthisis, diabetes, and diseases of the spinal cord, and also of the number of the insane amongst people similarly classified. The figures are as follows: From phthisis the mortality amongst the Jews per 1000 was—males 36·57, females 34·02; whilst amongst the general population it reached—males 108·79, females 146·12.

From diabetes, Jews per 1000—males 19·85, females 19·59; and the general population—males 2·74, females 1·21. From diseases of the spinal cord, Jews per 1000, males 9·40, females 6·18; general population, males 3·73, females 3·32. Although these diseases, spinal complaints and diabetes, have such an important influence on the mortality of the Jews, and are supposed to arise principally from nervous and mental strain (to which the exhausting business pursuits and head work of the Jews are supposed to subject them), the number of insane amongst them is only 44·5 per 100,000 of population; whilst amongst the general population of the United States it is 336. Mr. Adler sums up that Jewish longevity, fertility, and immunity from certain diseases cannot be looked upon as specially racial; he considers that they are due to moral and religious influences and are the outcome of Jewish habit, education, and environment; and he further maintains that these advantages will endure as long as such influences are permitted to operate, but that they must disappear, as to some extent they are disappearing, where the bonds of religion and traditional laws are relaxed.

THE COBWEB AS A STYPTIC.

WHEN Bottom was "translated" and introduced to the attendants of Titania, he endeavoured to ingratiate himself with Good Master Cobweb by saying, "When I cut my finger I will make bold with you." To arrest bleeding the application of a cobweb to the wound has long been a rural custom. Experience has shown that the gossamer of which the web is composed forms a very useful styptic; but a very fatal objection to its use arises from the fact that as an application to an open wound it can never be guaranteed to be surgically clean, forming as it does a net for insects, and at the same time for the germs of many an infectious disease. Evidence of this was produced before the Liverpool coroner recently touching the death of Martha Roberts, who, following the time-honoured custom, had applied a cobweb to her wounded hand to stop the bleeding. Blood poisoning followed upon its application, and this terminated, unhappily, in a fatal issue. It is not a solitary case. The principles of asepticism have not yet become part of the intellectual equipment of the people, neither have its lessons succeeded in overcoming prejudice.

GASTRIC ACTIVITY IN INFANTS.

M. VAN PUTEREN has made a long series of examinations of the digestive process in infants. A summary of the results of experiments made on 248 healthy infants is given in the *Boston Medical and Surgical Journal* of March 10th, 1892. The following points are noted:—1. After a meal of from sixty to eighty grammes of milk the stomach may be readily pumped out after an hour and a half, but the quantity ejected rapidly diminishes during the first hour. At the end of two hours only from twenty to thirty cubic centimetres may be obtained, and this disappears slowly in the course of half an hour. 2. The acidity of the infant stomach is much less than that of the adult stomach. This was tested by neutralising with one-tenth normal soda solution, using phenolphthalein as an indicator. The average results showed an increase of from 0·03 to 0·038 per cent.—that is, from 0·3 to 0·9 parts in 1000—for digestive periods of from ten to ninety minutes, after which no increase of acidity was apparent. The lowest acidity observed was 0·022 per cent., while the highest (0·121 per cent.) was only a half or a third of the amount considered normal in the adult. The determination of the character of the acid met with some difficulties, since many of the more usual colour reactions are uncertain in digesting mixtures of such feeble acidity. By the use of more exact methods M. Van Puteren convinced himself that hydrochloric acid is the normal acid in the infant stomach during the first two months, lactic acid being only exceptionally present. 3. The anti-fermentative action of the gastric juice seemed to be exceedingly feeble. Plate cultures made at successive periods of the digestion showed no marked difference in the number of colonies. The conclusion arrived at is that the gastric juice of the infant is not very efficient as a germ destroyer, and the infantile digestive organs are therefore particularly prone to disturbances, which, however, may for the most part be prevented by the use of sterilised milk. 4. The milk-curdling ferment (rennet) was always absent in infants up to twenty-four days, and could only be definitely demonstrated at thirty to forty days of age. M. Van Puteren's results as to the peptonising power do not seem sufficiently exact to be interesting. Albumen (by which is presumably meant a substance coagulable by heat) has generally disappeared by the end of the first hour, and peptone is constantly present twenty-five minutes after feeding and until the end of the digestive process. Sugar was always found, and fat also, so long as peptone was present. Free fatty acids (as the result of a fat splitting ferment, or of the similar action of the pepsin hydrochloric acid) could not be found.

THE DURHAM STRIKE AND MEDICAL MEN.

THE *Newcastle Daily Journal* has some very pertinent remarks on the hard case of the medical men in the pit districts. The miners who so light-heartedly continue their ruinous strike do not the less need medical attendance. On the contrary, disease is apt to assert itself in more serious forms under the conditions of a strike, and the colliery surgeon is expected not to strike. The inconsistency of human nature is well illustrated here. The miner would be appalled if his medical man struck, and declined to answer a summons to a fracture or a confinement. There are classes of men who on simple grounds of humanity do not strike, and yet attend to those who do. But they are all the more entitled to have a clear understanding with the miners as to their reward when the strike is over. A correspondent of the above-named journal suggests that the miners should agree to a deduction of 6*d.* a week from their wages when work is resumed till the debts are paid. The proposal is a reasonable one, and no honourable miner will refuse to agree to it.

THE REPORTED DISCOVERY OF THE MEASLES BACILLUS.

DR. CANON and DR. PIELICKE, of the Moabit Hospital, the former of whom was one of the first to demonstrate the presence of the influenza bacillus in the blood, have now turned their attention to measles, and it is reported (as will be seen by reference to our Berlin correspondent's letter) that they have been so far successful that they have been enabled to demonstrate the presence of a specific bacillus in connexion with this disease. This discovery has naturally attracted considerable attention; for although *a priori* we should expect measles to be the result of the action of such a germ, we have hitherto been unable to associate it directly with any such causal agent. In fourteen patients they have succeeded in finding what they assume to be a specific bacillus in the blood, in the expectorations, and in other secretions. This bacillus is stained with methylene blue in the same way as the influenza bacillus, the colouration being specially intense at the ends. The different individuals differ considerably in length, being from $\frac{1}{5000}$ to $\frac{1}{1000}$ of an inch. Its characteristics are said to be different from those of any other bacillus known, and artificial cultures have already been obtained. If once we are enabled to study the life history of this organism, there seems to be a possibility that we shall be able to take some efficient

steps in the protection of children against this disease. The further observations on this organism and on its power of producing the disease will be awaited with additional interest from the fact that it appears to be so like the influenza bacillus in its distribution, and also to a certain extent in the effect it produces, in spite of the fact that it is very different in structure and appearance from the influenza organism. We hope that this is not another cry of "Wolf," unless it be the final one.

DENTAL LECTURES AT HASLAR HOSPITAL.

AT length something has been done to give some instruction in dental surgery to the medical officers of the navy, and we heartily hope this will be a forerunner of a similar step with regard to the army. Surgeon Herbert Canton has been appointed to the *Victory* for Haslar Hospital from May 16th, for the purpose of giving a short course of lectures in dentistry to surgeons passing through the course at the hospital, and to otherwise educate them in the simpler operations of dentistry. He will also perform all the dental operations required at the hospital and on board the *St. Vincent*, and in the interval between the two courses of instruction visit the *Boscawen* at Portland periodically, and if possible the Marine Division at Chatham and the Marine Depôt at Walmer.

NURSES AND RELIGION.

PROFESSOR VIRCHOW, in the Berlin Municipal Council and in the course of a debate on the new Municipal Hospitals, has been speaking in his most vigorous style against what he is pleased to call "the intrusion of religious arrogance" into hospital nursing work. "Everybody knows," he says, 'that creeds claim supremacy in the healing of the sick; but we are profoundly interested in keeping away this conflict from the sick bed, and in permitting the spirit of humanity alone to assert itself there. ..... The community establishes numerous hospitals, and thus has an opportunity of providing for the training of sick nurses without regard to creed." Such is the gist of Professor Virchow's characteristic deliverance on this question. We are bound to admit that the advocates of "creeds," as distinguished from the advocates of religion in the large, broad, human sense of that indispensable word, have fairly exposed themselves to this attack. They have often laid themselves open to the charge of using the hospital and the accident of sickness as means of proselytising. But whatever it may be in Germany, we cannot in England afford to divorce religion from hospitals. They are a field on which Jews and Christians, Protestants and Catholics coöperate, and even learn to respect each other's religions. Hospitals in this country so far are neither State institutions nor Municipal ones, but voluntary. And religious people have been their chief founders and supporters. The "spirit of humanity" has its chief expression and example for us in Him whose supreme test is in the words "I was sick, and ye visited me." If religion will keep on such lines it will not be easily expelled from our hospital service. If it does not, but worries the sick with narrow questions of sect and creed, it will be dislodged from its high position.

PUBLIC HEALTH AND VACCINATION IN FRANCE.

A PUBLIC HEALTH BILL for France is proposed by the Minister of the Interior, who includes in his office a sub-department of public hygiene, and in accordance with a very useful French custom the Bill is accompanied by an *exposé des motifs*, which sets out a detailed statement of the advantages of the Bill generally, and an explanation of the significance and value of each separate section. Lengthened quotations are contained in this *exposé*, embodying the views of such men as Fauvel, Rochard, Brouardel, Proust, and A. J. Martin; but it is impossible not to see in the document the handiwork of M. Henri Monod, the energetic and able head of the department of Public Health. M. Monod has made himself thoroughly conversant with the results of sanitary administration in other European countries, and he does not fail to point out to his countrymen the advantages they will secure if in certain respects they follow the lead of others. The document is especially complimentary to England and to the sanitary administration which is organised under the supervision of the Local Government Board, and the French nation is reminded that if they could succeed in securing a saving of life from the more preventable diseases such as has been obtained in this country since the passing of the Public Health Act (1875) they would gain no less than 130,000 lives annually. The Bill contains a compulsory clause which in its working is not unlike Section 299 of the English Public Health Act, although the initiative in providing works without compulsion does not appear to lie so completely with the inhabitants of the actual district to be benefited by them as is the case with us. Article No. 8 is instructive at a time when we in this country seem to be hesitating as to compulsion with regard to vaccination. The clause follows rather the Prussian than our existing English precedent. It enacts that primary vaccination shall be compulsory before the end of the first year of life, and that revaccination shall also be compulsory, a first time during the tenth, and a second time during the twenty-first year of life.

REJECTION OF THE STOKE NEWINGTON HOSPITAL SITE.

BY a majority of one, the motion to build another fever hospital for the purposes of the Metropolitan Asylums Board at Stoke Newington has been rejected. The objections to the site were, in the main, two in number. First, deterioration in the value of property—an evil that must be faced anywhere if a hospital is to be provided within reasonably easy reach of those whom it is to serve; secondly, the fact that the New River runs through an angle of the site. Small-pox was not in question, and we have thus far no definite evidence to the effect that the contagia of the other specific fevers would so travel aerially as to contaminate an adjacent flowing stream. On the other hand, it cannot positively be asserted that no such occurrence is possible, and hence, had the site been taken, it would have been proper to have culverted the river at this point. But, on the whole, the decision arrived at is perhaps the wisest.

THE ROYAL COLLEGE OF VETERINARY SURGEONS.

IT would appear that the members of the veterinary profession are no more agreed among themselves as to their position with regard to the Council of their Corporation than are those of our own profession, though they have less cause for complaint. It seems that some years ago the Royal College of Veterinary Surgeons applied for and obtained a new charter, giving it power to institute a Fellowship degree. This degree was conferred upon a certain number of the more distinguished of its Members who had been some years in practice, and on payment of a specified sum. These were Foundation Fellows. Afterwards the Fellowship was given only to those who had been at least five years in practice, and were certified by three Fellows to be fit and proper persons, after passing a written and oral examination and paying a larger examination fee than the Foundation Fellows had done. The inducement held out to Members to become candidates for the higher grade, was that Fellows alone were to be eligible to

act as members of Council and of the Examining Board. For ten or eleven years Members have become Fellows and paid their money with this inducement before them; but now another charter is applied for which is to deprive Fellows of the sole privilege of being members of Council, and this is resented by a number of the Fellows, who have appealed to the Privy Council against the deprivation, pointing out that they have spent time and money and suffered much inconvenience to obtain the proffered privilege. They also show that by having gentlemen as councillors who have been a certain number of years in practice, have a recognised social position, and have given proof of their zeal and capability, the public and the Government have a guarantee that the affairs of the profession are in good hands. How far the Privy Council is likely to accede to the desire for a new charter, or whether it will recognise the agreement between the College and the Fellows as binding and to be maintained, it is, of course, impossible to tell. But it appears that every Member who has been five years in practice can become a Fellow on the prescribed conditions, so that there is nothing prohibitive to becoming a Fellow. Another important matter is that every registered Member of the College can vote for members of Council, voting papers being sent to them for every election. This, it will be seen, is a very different case to that of Members of the Royal College of Surgeons.

THE SANITARY STATE OF SOUTHEND.

WE regret to have to recur to the subject of the sanitary state of Southend. But, in view of the past history of this town and of our former comments on it, we should take upon ourselves a serious responsibility if we did not at least warn holiday-makers to seek medical advice before deciding on the houses they intend to occupy. The most recent information which reaches us is as to sewage-flooded cellars in the town, and we need hardly say that houses that have thus suffered are not residences to be occupied even by the healthy, to say nothing of those who, after heavy work, seek for a brief space the rest and healthful influences of a seaside resort. We would at the same time call attention to the fact that the Local Board of Health have shown their determination to rid their town of its present unwholesome influences by calling in the services of Mr. Mansergh, C.E., and if they do all he recommends, they will at least have taken ample measures in so far as the public sewers are concerned.

APRIL WEATHER.

AMPLE proof has been afforded us during the past three weeks of the proverbial fickleness of April weather. Ten days before Easter we were in the apparently settled enjoyment of a season mild, sunny, and dry, the precarious foretaste of summer which commonly cheers for a brief space the later days of spring. Then follows the biting chill of winter winds, with rain and the very unusual addition of a snowfall worthy of December. The variations in temperature during the month have been correspondingly wide, falling repeatedly to near freezing point, and again on the same day reaching a level of 40°, 50°, or 60°, and even higher. It would have been extraordinary indeed if we could not trace the incidence of changes so frequent and so sudden as these by corresponding effects upon the health of those exposed to them. Such undesirable evidence is to be found in the recent prevalence of catarrhal ailments, though these have not been associated in the degree which might have been expected with inflammatory illnesses of a more serious character. In view of the present atmospheric depression, alike as to temperature and density, we may fitly recall the fact that the present season follows on a period of similar depression in the physical power of individuals, which reaches its close at the spring equinox. It is consequently no time for the remission of what may appear to some superfluous precautions in the matter of bodily warmth, and in particular of warm clothing. There are many persons who readily forget this fact in the temporary discomfort caused by wearing somewhat heavy clothing during a short and summer-like interval. This is natural, no doubt, in its way, for vegetable growth, in like manner, trusts the passing time and comes forth, to be afterwards nipped by a chill. Even in this case, however, man is in the greater error. In the case of the plant exposure is gradual; in that of man, too often immediate. With the former, too, each interval of mildness has to be snatched, as it were, for development; but man can wait for the luxury of physical comfort. In the interest of that greatest comfort, health, we would advise him to wait, until at all events the chilly nip, which always comes about the middle of May, is over, or even until the month itself is "out."

CLOSETS FOR THE WORKING CLASSES.

THE Midland Branch of the Association of Medical Officers of Health have unanimously condemned the midden-privy system and the pail-closet system for large towns. They maintain that water-carriage, by means of which excreta are rapidly removed from the neighbourhood of dwellings, is the only desirable method; and Dr. Bostock Hill, who brought the matter forward, urges that the Birmingham automatic slop water-closet has solved the difficulty. The report which was recently issued by the medical officer of the Local Government Board on this subject, taken together with the opinion of the health officers, will doubtless serve to stimulate action in this direction; but, on the other hand, it must be borne in mind that several requisites are essential to the proper working of this system, and that, unless these requisites are obtainable, the slop water-closet cannot be regarded as a proper one to supply to the working classes. Amongst these conditions are an ample water-supply actually laid on to the houses, means for storage of slop water, and means for its discharge automatically in bulk. Where these are not available, dry systems offer a better chance of freedom from nuisance, and such failure as has attached to this latter method has often been due to faulty construction of closets and neglect of the sanitary authorities to undertake their cleansing—evils that can easily be avoided.

ANTI-VACCINATIONISTS DEFEATED.

WITH what sounds very like the first warnings of a small-pox storm in the country it is gratifying to have to record the triumph of common sense in the form of a decided defeat of the anti-vaccination candidates in the recent guardians' elections at Guildford. They were not only beaten in all the parishes, but they were beaten by larger majorities than on the last occasion. Small-pox is the real schoolmaster to direct people to the vaccination stations. But the majority of English parishes should have sense enough to take the account of small-pox from history or from the experience of others, without waiting till it attacks themselves or those dearer to them than their own life.

SANITARY PROGRESS IN VICTORIA.

SINCE Dr. Astley Greswell was appointed chief health officer to the colony of Victoria he has been most actively employed in learning the sanitary circumstances of the population, and he has at every opportunity sought to rouse the inhabitants to the realisation of the necessity of a higher standard of health, basing his advice very largely on the experience which he gained in this country, and which he knows so well how to adapt to the local circumstances prevailing in his present sphere

of labour. Some of the reports which he issues on local outbreaks of disease remind us very much of our practice at home; one set being prepared by local inquirers and prefaced by him, in order to bring out those lessons which are of general application; others being exclusively from his own pen, and these deal ably, but at times trenchantly, with the local sanitary shortcomings. Amongst the most recent documents issued is one as to the need of providing means of isolation for persons affected with communicable diseases in Melbourne, and here also Dr. Gresswell sets out many of the arguments which in this country have aided in promoting the extension of a system by which isolation hospitals are provided by sanitary authorities.

FOREIGN UNIVERSITY INTELLIGENCE.

Berne.—Dr. Tavel has been appointed to the chair of Bacteriology.

Clausenburg.—Dr. Ladislaus Udránzky of Buda-Pesth has been offered the post of Extraordinary Professor of Physiology, vacant by the transfer of Professor Klug to Buda-Pesth.

Innsbruck.—Dr. Philipp Biedert, of the Bürge Hospital of Hagenau in Alsace, has been offered the Professorship of Children's Diseases.

Prague.—Bohemian University: Dr. Carl Chodounsky, *privat-docent* in Pharmacology &c., has been granted the position of Extraordinary Professor. German University: Dr. Rudolf Fischl has been recognised as *privat-docent* in Children's Diseases.

Vienna.—Dr. Paul Dittrich has been officially recognised as *privat-docent* in Forensic Medicine.

Würzburg.—Dr. Gustavus Klein has been recognised as *privat-docent* in Midwifery and Gynæcology.

THE academic world in Italy is congenially employed in celebrating the fifth centenary of the University of Ferrara, a decaying seat of learning, which the Town Council recently memorialised Government to suppress. There are too many universities in Italy, and graduation at them is so easy, particularly in the faculty of law, that the country is more than overstocked with "avvocati." To halve their number and to double their efficiency is what many of her reformers are urging.

THE Medical Society of London will give a conversazione in their rooms, 11, Chandos-street, Cavendish-square, on Monday, May 2nd. The oration on "Sex in Education" will be delivered by Sir James Crichton Browne, M.D., F.R.S., at 8.30 P.M. There will be a reception by the president at 9.15, and smoking will be permitted at 10 o'clock. The string band of the Royal Horse Guards will attend.

A Reuter's telegram from Genoa states that the steamer *Duchessa di Genoa*, with 872 passengers from Brazil, arrived there with yellow fever on board. Five deaths had occurred during the voyage. The vessel is lying in quarantine off the coast of Sardinia.

THE death of Elijah Whitney, M.D., the oldest practising physician of New York, has occurred at the age of ninety-four. He was a personal friend of Webster, Clay Calhoun, Wendell Phillips, and all the men prominent in Government circles before the War of Secession.

SIR JOSEPH FAYRER has been elected a corresponding member in the Class of Mathematical, Physical, and Natural Sciences of the Royal Academy of Science of Lisbon.

MR. REES MORGAN, L.R.C.P.Edin., L.F.P.S.Glas., has been appointed deputy coroner for the Eastern Division of Carmarthenshire.

PROFESSOR STEWART'S LECTURES
AT THE
ROYAL COLLEGE OF SURGEONS OF ENGLAND.

PROFESSOR STEWART, Conservator of the museum of the Royal College of Surgeons, delivered last month in the theatre of that institution a series of six lectures on "The Physiological Series of Comparative Anatomy in the College Museum." He said no collection in the museum was more richly supplied with specimens than the physiological series, and it was probably the portion which was dearest to the heart of Hunter, since he of all men felt most clearly the importance of studying the various forms of living things, believing so thoroughly that they threw light one upon the other, and that some knowledge of them was at all events desirable for the medical man, not only as a form of culture but as a means of broadening his mind and of giving him a view of the phenomena of life which the study of man alone could in no way bring about. The rearrangement of this series had been a task ever present before Professor Stewart as one of the most immediate necessities of the future. In order, as it were, to lay the foundation for this work he had drawn up a scheme, provisional in its nature, for his guidance in the contemplated work. He proposed to break up the physiological series into a number of groups indicated by letters of the alphabet and each to be independently numbered. Thus, regarding first those structures concerned in the preservation of the individual or to its advantage, in Group A, taken purely as a matter of convenience, which he had been obliged to consider, rather than any rigid or absolute law, he included the endoskeleton, by which is meant all those more or less deeply seated structures concerned in giving support, strength, rigidity, and protection to more deeply seated parts; and in some cases furnishing the levers and fulcra for the movements of parts of the body and giving attachment to the muscles, its physical properties being independent of life. In the next group, B, he intended to arrange all flexible bonds of union and support, either as connecting soft parts or rigid structures; C would contain the contractile and muscular systems; D, organs for locomotion, floating, boring, and fixation; E, the nervous system; F, organs of special sense; G, integumentary system and exoskeleton; H, luminous and electric organs. Regarding, in the second place, those organs concerned in nutrition, Group I would include reserve stores of food and calorific matter; K, the organs of direct absorption; L, the organs of digestion; M, nutrient fluids and organs that prepare them, including the ductless glands of unknown function, blood, lymph, and blood and lymph elaborating organs; N would deal with the circulatory system and body cavity. Under the third great head of blood-purifying and sound-producing organs would come—O, the respiratory system; P, sound-producing organs (including the larynx and syrinx; Q, urinary organs (including kidneys and bladder); R, specialisation and division of labour amongst "persons" or "individuals." In the fourth great head, the structures concerned in the preservation of the race would be arranged thus: S would include the reproductive system; T, structures for the protection of the young (including eggs, egg capsules, nests, &c.); U, structures concerned in the nourishment of the young, including mammary glands and placentæ; V would possess illustrations of the various steps in the development of different creatures, and would be supplemented by models. Then would follow certain series not falling under any of the previously mentioned heads, but of which it would be convenient and necessary to have examples. Under W would be brought together all the specimens which serve to illustrate secondary sexual characters—that is, those characters which distinguish the sexes from one another, but which are not directly or indirectly concerned in reproduction. This would include also sexual dimorphism and polymorphism. Under X would be grouped illustrations of normal variations of species; and Y would show the association of different species with or without modifications of structure, those curious associations which may be either for the advantage of one without injury to the other (commensalism), for the advantage of all the associated forms (symbiosis), or for the advantage of one, more or less, at the expense of the other (parasitism).

The six lectures were intended to illustrate as far as

possible the idea underlying the proposed grouping of the series as recorded above; and it is with a view of showing this—as well as of presenting to our readers the intensely interesting nature of these lectures of Professor Stewart, illustrated throughout as they are with such artistic facility and beautiful specimens, and abounding with information regarding living organisms which cannot fail to stimulate the hearers to seek further knowledge of such subjects—that we give the following brief outline of the course. Beginning with Group A—which includes all structures that function, as endoskeleton, whether derived from ectoderm, mesoderm, or endoderm, or the equivalent embryonic layers,—and first taking up the lowest forms and the simplest types, the lecturer showed instances in plant life of the existence of an endoskeleton. The fibro-vascular bundles of plants, familiar to many as giving the stringiness to celery and other plants, were not only merely conducting tissue, but acted also in part as an endoskeleton. These bundles were, however, so much concerned in conduction that they would fall under another group. Certain red and green algæ might have a hardness and rigidity due to lime salts which clearly was not endoskeletal in nature or function. But examples of a true endoskeleton could be found among the algæ as bundles of prosenchymatous cells with some extra thickness of their walls. In delesseria sanguinea this condition is found as the tissue traversing the axis of the thallus and lateral branches diverging from it. Amongst the fucaceæ it is present, and attains its maximum development in various species of turbinaria. Of these the structure was demonstrated on the blackboard. In ferns and club mosses deep-seated bands of this tissue of extreme hardness contributed towards the strengthening of the stem. In palms similar structures were found associated with each of the fibro-vascular bundles, and the duramen or heart wood of the ordinary exogen might also be considered as endoskeletal; though also in part it is the place where sundry waste products in the way of resins and colouring matters may be deposited. In the remarkable African plant, the Wellwitschia mirabilis, an extreme development of large thick-walled spicular cells, giving it strength and stiffness, was noted. He then alluded to the modified crystals of lime (raphides) salts found in the squill, hyacynth or tulip, serving to defend them from slugs or insects which subsist on vegetable tissue. These plants often had an exceedingly acrid taste, not due, as has been supposed, to their juice, but to the mechanical irritation of the tongue caused by these crystals (raphides). Proceeding to the animal kingdom examples were sketched from the heliozoa and the radiolaria. In the latter the endoskeleton was present as a perforated organic capsule separating the inner and outer portions of the protoplasm. In addition to this there might be spicule-like bodies of acanthine or siliceous material or a complex network of solid siliceous bars.

In the metazoa an endoskeleton might be present as isolated spicules of a calcareous nature in the calcareous sponges, and of a siliceous nature, and exceedingly varied in form in the siliceous sponges. The various forms were admirably sketched on the blackboard. In the horny sponges it consisted of a network of horny fibres closely allied to elastin, with which foreign bodies were sometimes incorporated. Coming to the hydrozoa, a structureless supporting lamella between the two layers of the body wall formed the endoskeleton, a layer which became thickened in the smaller medusæ; and in the more complex forms acquired a character resembling the connective tissue of the umbilical cord, from the migration of cells into it and the formation in the matrix of a fibrillary structure. It was interesting in these forms to notice that the endoderm might enter into the formation of the endoskeleton, the solid prolongations of this layer into the tentacles often acquiring a character resembling the notochord in the chordata. This gradual development was illustrated in detail by sketches of the structure of various creatures representing its stages. In the echinodermata the lecturer said that it was convenient to consider only such specially deep-seated parts of the skeleton—as, for instance, the jaw apparatus and auriculæ of the echinoidea and the circumoral plates of holothurians, which gave attachment to the great longitudinal muscles of the body and the axial plates in the arms of ophiurids—as examples of this structure. In the higher arthropoda, as the lobster, involutions of the integument which formed a calcified cuticle formed the endophragmal system and performed the function of an endoskeleton. Besides this, another form of endoskeleton derived from the mesoderm was present in some. In apus, for example, there lay a deep-seated plate, with outlying processes giving attachment to the muscles situated between the nervous system and the alimentary canal, and possessed of the structure of fibro-cartilage, but having the chemical composition of chiten. This peculiar portion was known as the endosternite. This endosternite attained large dimensions and much importance in the limulus, in which creature it had essentially the same structure. In the spiders it acquired very great complexity of form, but maintained essentially the same minute structure. In the scorpion, a portion of it formed a broad plate, separating the abdominal region from the cephalo-thoracic. In insects, amongst the lepidoptera (butterflies and moths) a curious rod-like body is described by many naturalists lying in the abdomen immediately above the central nerve cords. Further investigation of the structure was much required. In the great group, mollusca, the development of the shell removed the necessity for any large development of endoskeleton, but certain cartilaginous plates existed, forming, as it were, a bed on which to rest the rasp-like tongue, and to which the muscles of that organ were attached. In cuttlefish, active free swimming forms, a large development of a cartilaginous endoskeleton existed, most of the cartilages showing in the matrix, cells, freely communicating with one another by processes of their substance. One of the cartilages of the globe of the eye (equatorial) differed from the others in the cells being without such processes, but each was surrounded by a small amount of firm intercellular substance. These cartilages were drawn, and a beautiful preparation was used to illustrate the anatomical features. In the chordata forms, which had as a common feature the detachment of a rod-like group of cells from the alimentary canal in order to form the cartilage-like notochord, the structure was found as an axial support of the tail in urochorda. Of this an account of the general structure of the appendicularia was given as an example.

In the hemichorda the anatomy of a remarkable worm-like form (balanoglossus) was sketched, the notochord being shown to be present as a rod extending from the first part of the alimentary canal into the proboscis. In amphioxus the notochord was shown as a rod stretching the whole length of the body. Besides this, a series of cartilage-like structures were present to support the dorsal crest, a delicate rod-like bit on either side of the mouth, with extensions into the oral fringe, and a bar-like thickening extending along either side of the body walls. In the craniate forms of true fish, in lampreys and their allies, a highly developed cartilaginous skeleton could be found. In the elasmobranchs (sharks &c.) the endoskeleton was mainly composed of cartilage, but with minute plates of calcified cartilage usually present on its surface. Calcification of cartilage, such as occurs in the larynx of old people, occurred in this group as a normal feature. The lecturer recapitulated the views held on this subject. Possibly the group of cells in each plate was descended from one parent-cell, having something in its character which prevented the calcification extending into neighbouring groups. Each plate remained distinct from its neighbour, and each plate showed a radiating arrangement of the cartilage cells contained within it. In the bony fish and ganoids, where the structure was hardened by lime salts, great and interesting differences were found in the minute structure of the tissue. In the common garfish or green-bone the bones were remarkable for the emerald green colour of the matrix, and the bones of the head at all events showed a complete absence of lacunæ and their canaliculi, the tissue having a character resembling dentine due to branching tubes extending inwards from the surface, as is shown in Fig. 1.

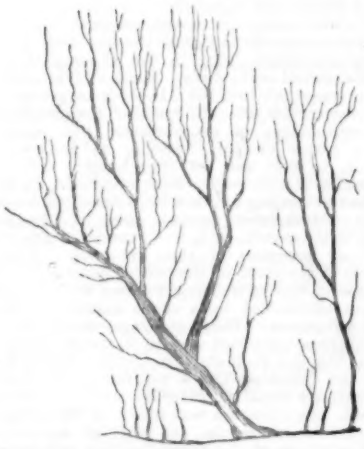
In the bones of the seahorse similar tubules were to be found radiating from all the vessel containing channels. As these were much finer than in the former case the resemblance to dentine became exceedingly close. Some idea of its structure will be obtained from Fig. 2.

The intensely hard bone of the swordfish, the microscopical structure of which is given in Fig. 3, consists of a solid bony matrix surrounding each vascular channel. Evidence of its intense hardness and strength, and of the force with which the fish can propel itself through the water, was given by the exhibition of a specimen of a preparation of the hull of a ship, which the fish probably had mistaken for a whale, of which the copper sheeting, teak, and oak, amounting in thickness to thirteen inches, had

been completely penetrated by one thrust of its bony weapon.

In amphibia the large and varying proportion the cartilage bore to bone constituting the skeleton was indicated, and the fact pointed out that the large bones of many extinct reptiles were rendered light by their medullary cavities being occupied by air-filled chambers continuous with the great air sacs, which communicated with the lungs, a feature similar to that which is well known in most birds,

FIG. 1.



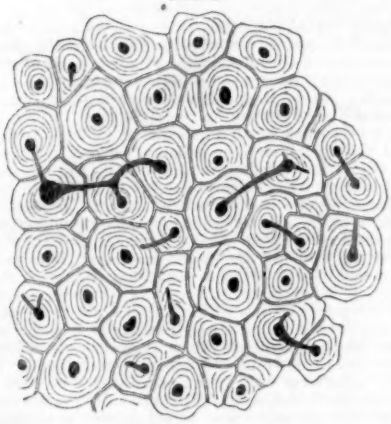
but which has, however, no relation to flight, but served simply to lighten the skeleton for any purpose. The greater number of Haversian canals, the more tortuous canaliculi connected with the lacunæ, was pointed out as being a common characteristic of the bones of birds, and the pneumatic feature either in them or in reptiles was always associated with circumferential lamellæ, in them always bounding the medullary cavity instead of the outer surface of the bone. The typical mammalian structure was of

FIG. 2.

course presented by human bone, of which it was not necessary to speak with detail; but a peculiar feature was pointed out in the ornithorhyncus—namely, that although lacunæ with their canaliculi were present, yet many of the Haversian canals showed long tubules directly radiating into the surrounding matrix, reminding one of that dentine-like structure already referred to as an aberrant feature in the bones of certain fish.

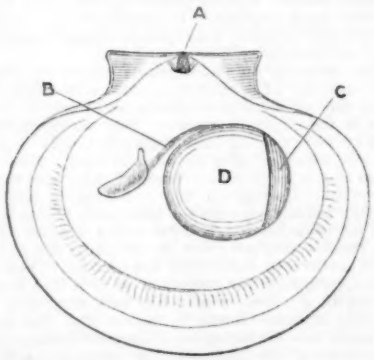
Having thus given an idea of the mode of dealing with Group A, the lecturer next went on to illustrate the mode of arranging Group B by giving a general account of the familiar structure of areolar tissue formed by the web-like interlacing of wavy bundles of white fibrous tissue and fibres of yellow elastic. It loosely connects and supports parts allowing movement in any direction with spontaneous return to position of rest. The illustrations were drawn on the blackboard. Yellow elastic tissue was next exemplified by the specially developed layers of the abdominal walls of

FIG. 3.



ruminants. Then the bonds of union connecting hard parts were taken up. The crustacea furnished examples of these, certain portions of the cuticle remaining flexible and free from calcification, and serving to unite the stiff calcified regions. A drawing was made to illustrate these two parts. Examples of elastic union were taken from the internal or external elastic ligaments of the bivalves. The common pecten furnished an illustration (see Fig. 4) of an elastic spring compressed when the valves were closed, and by which they were forced apart when the muscles ceased to contract. The elastic ligament of the cockle, on the other

FIG. 4.



A, Elastic ligament. B, Retractor of foot. C, Non-striated, for closing valve. D, For swimming—striated.

hand, being placed outside, was stretched when the valves were closed, and served to pull them apart by recoil when the muscles were relaxed. Then the great class of ligaments belonging to the endoskeleton, and which were extensile and elastic, was illustrated by the ligamentum nuchæ, say, of the giraffe and the ligamentum subflava. Examples of non-extensile ligaments were taken from the ligaments of the vertebrata, the general and minute structure of which was given, and it was pointed out that they would be arranged in anatomical groups. Passing to Group C, which comprises the contractile and

muscular systems, a general account of the movements of protoplasm, with the phenomena of movement in the sensitive plant, was recounted. The arrangement of muscular tissue in various groups of animals, beginning at the lowest, was described and drawn. After giving the structure of the two great groups of muscular tissue, it was pointed out that to a great extent it might be considered true that the more complex striped tissue was associated with quickness of contraction, it being present in the quickly contracting muscle of the subumbrella of hydrozoa, in the tentacles of hormiphora, in all the muscles of the arthropoda with the single exception of peripatus, which had unstriped muscle like a worm. In the branchopods a remarkable exception to the usual character was found to the usual unstriped character of the muscular tissue, in that the posterior occlusor muscle is beautifully striped. In bivalves the greater portion of the great adductor muscle in pecten, which is used for swimming, is striped; while the small posterior part used in maintaining the closed condition of the valves is unstriped. Then, in the sea-squirts the heart muscles are striped, but the mantle of the fixed forms is unstriped; but where the mantle muscles are subservient to locomotion they are striped, as in salpa. The lecturer remarked in passing that the presence of hæmoglobin in the buccal muscles of many gastropods and in the sphincter at the mouth of the sea anemones might possibly in these cases account for their greater energy of action.

LIFE ASSURANCE AND THE MEDICAL PROFESSION.

THE interest manifested by many of our readers on the subject of Life Assurance has led us to examine with some care the various reports and statements of account which have reached us during the present year, and to prepare for the information of those among them who are concerned with the subject the following notes upon what appear to be their most salient points:—

The *Alliance* is a comparatively young but vigorously administered office, which annually receives a large accession of new members. Its report for the past year exhibits no striking feature, but records a steady advance along the accustomed lines of movement. The *Atlas*, as a very old established office, produces a report in which the most salient feature is the great age of the deceasing members, the amount shown as disbursed in claims having been paid to the extent of more than 60 per cent. in respect of deaths occurring among persons upwards of seventy years of age. The *Equitable of the United States* is a younger office, and, as its name indicates, of American origin. But it brings out results of the most astonishing magnitude, and with an income exceeding £8,000,000 a year it fitly supports the reputation of America for doing things upon a large scale. The *Marine and General Mutual Life Assurance Society* is not as old as the *Atlas*, nor does it transact as large a business as the *Equitable of the United States*, but its premium income has been well sustained during the past year, and, what is much more important, the pressure of working expenses upon the revenue has been appreciably lightened. An excessive mortality, due probably in greater or less degree to the prevalence of influenza during the period under review, has marred the financial result of the year's operations, though without making the mortality experience of the company abnormal if a period of three years past is included in the review. The *Railway Passengers' Assurance Company* is at once the largest and best known of the companies which transact accident insurance business. Its report shows that compensation of the kind provided by its policies has during the year been paid to an amount approaching £150,000, a figure which indicates not only widespread connexion, but also an incalculable amount of relief of the pecuniary distress which every-day misadventures cause. *The Economic Life Assurance Society* has just undergone a process of remodelling by the substitution of new rules and regulations for the deed of settlement under which its business has heretofore been carried on. The directors report that they have availed themselves of these new regulations to revise and improve the conditions upon which the Society's policies are granted. *The English and Scottish Law* makes the growth of its business during the past year the great feature of its report. The accounts disclose a very heavy rate of working expense, which does more to explain than to justify the popularity of which the directors make their boast. *The London and Lancashire* is a comparatively young office, but it obtains a very considerable proportion of new business. Like most other young assurance companies, it obtains its results at a comparatively heavy working cost; but the fault is one which it tends to outgrow. The *Mutual Life Assurance Society* exhibits a record which, upon the crucial question of economy of resources, is entitled to very high rank. The present annual report presents the result of consistent attention to this matter in the shape of a very handsome surplus for distribution among the policy holders as the outcome of a recent valuation. The report of the *Law Union Fire and Life Insurance Company* records the result of an amalgamation recently effected with the *Crown* office. The accession has naturally produced a large augmentation of revenues; but in the life department it has been made the occasion of providing for depreciation of securities and extension expenses by the sinking of a sum of £20,000, an item which quite spoils the financial result of the year's operations. The *Gresham Life Assurance Society* transacts so large a proportion of its very extensive business abroad that it is difficult to find a standard of working cost by which to test the merit of its administration in respect of economy. The valuation test yields a very satisfactory result in the shape of a divisible surplus of upwards of £80,000 as the outcome of three years' working and the result of a 3½ per cent. valuation. An important change has just been effected in the constitution of the Society, by which its policy holders acquire a larger interest than heretofore in the surplus from time to time divided. The *New York Life Insurance Company* has undergone during the past year a very searching investigation, from which it has emerged by no means scatheless. The report of the Insurance Commissioner of New York has, however, established the all-important point of the Company's solvency, and in their present report the directors refer to changes of *personnel* which they say will remove whatever doubt may have been felt as to the future administration of the Company's affairs. The *London Life Association*, an office which has long and deservedly enjoyed the very highest reputation among "those who know" for economy and the efficiency which results from economy, has just issued a new premium table, under which half-premiums only are at first chargeable, the bonus being expected to reduce the full premium to something like the same figure as the original half-premium by the time that the half premium term has worked out. The scheme is intended to compete with the "assessment" schemes which have attained to a great, though wholly unmerited, popularity within the past few years; and being undoubtedly sound, whether regarded from this point of view or in the broader aspect of a new attempt to adjust the means of a life assurance scheme with some precision to its ends, it is deserving of great praise.

(To be continued.)

THE CONTAGIOUS DISEASES ACTS.

A LEADING article in the *Times of India*, published at Bombay on Feb. 26th last, draws attention to the evil caused by the abrogation of the Contagious Diseases Acts. Last year the editor of this same paper felt it a duty, distasteful though the subject must be, to draw public attention to the statistical revelations of the spread of the disease throughout the European army in India as contained in the last annual report of the Sanitary Commissioner with the Indian Government. The writer notices with gratification "that the outcry against this fatal mandate of repeal is becoming at home more powerful year by year as the evidence of the ruin wrought among men and women alike in garrison and seaport towns accumulates with sickening intensity." After glancing at the state of matters in the army and navy at home before the passing of the Act of 1864 and subsequent Acts, at the results of the Acts in effecting a reduction of disease wherever they were enforced, and the results of

their repeal, the writer passes from the men to the women in words which may well be reproduced :—

> The social evil is one of the saddest blots on the progress of civilisation, nor is it the shrieking sisterhood alone who are left to bewail it. If shrieks could abolish it all humanity would join in the hue and cry. Unfortunately, it is a stern fact, which the best endeavours of the wisest and kindest of mankind can only do something to modify. These wild agitators forget that the policy they advocate is as heartless as it is blind and inconsequent, for it strikes at the very people whom they most design to save. Let the men, if it must be so, suffer the consequences of their folly; but is that any reason that the unfortunate women, more sinned against than sinning, should be abandoned to the horrible consequences of the life they lead? It should be proclaimed with emphasis that the other sex reap at least as large benefits, and it is humane to see them protected from the consequences of their misfortune, their ignorance, or their guilt. We do not envy the spirit of cruel inhumanity that, parading under the sacred mantle of morality, abandons the most pitiable of their sex to the fellest of diseases to protect themselves from its ravages just as they like and however they can. That these Acts should be attacked in the name of womanhood is proof of one of the most signal outbreaks of demented fanaticism that was ever provoked by a hysterical cry. It is precisely womanhood in its most helpless and appealing conditions of abandonment, reckless of the consequences from the very nature of its environment, it is womanhood, that ought to be rescued and cared for, and protected from the physical disorders of its own despair. The Acts had this consequence directly, but their indirect assistance in reclaiming poor women to a better life was also immense, though not capable always of demonstration by statistics. It is impossible that the higher influences for good under which they were brought in hospital, by the kindly visits of clergymen and others, should not inspire, if not absolute conversion, at any rate wholesome leanings that are not without appreciable fruit. The wickedness of allowing such diseases to run riot through the army, taking into account the taint it impresses on an innocent posterity, has been harped upon sufficiently to open the eyes of the blind. Altogether, from whatever side these Acts are regarded, they are seen to be directed only to the operation of a truly benevolent work, and nobody with a fair mind and with a capacity for weighing the simple issues of a painful problem will for a moment charge the supporters of the Acts with the oblique purpose of making immorality safe.

It is hopeless to expect anything to be done, either by inquiry or legislation, during the existing Parliamentary session so far as the Government is concerned. But much might be done on the part of local authorities in reducing at least some of the worst phases of the "social evil" by providing hospitals for those who are diseased, by prosecuting those wretches, both male and female, who live on the wages of girls' and women's shame, and by increasing the provisions of "homes" and "refuges" in reclaiming those who are still reclaimable. We trust that the subject will be considered worthy of notice by some of the leading daily papers. We have done our part through evil and good report. Let the lay press do theirs.

FRENCH WORKMEN'S SANITARY CONGRESS.

DR. DUJARDIN-BEAUMETZ ON FOOD.

ON the 9th inst. the first of the preparatory lectures for the forthcoming French Workmen's Sanitary Congress was delivered by Dr. Dujardin-Beaumetz. There was a very large and attentive audience, almost all the trades of Paris were represented, and the workmen throughout manifested the greatest attention. The lecturer was introduced by M. Lavy, the Deputy for Montmartre, who represents the Possibilist labour party in the French Parliament. M. Lavy explained the reason why these lectures were delivered. The programme of their party had been affirmed with sufficient emphasis, and it was now time to turn from theory to practice. The object of the forthcoming Congress would be the study of the means of saving life. Workmen were now going to ask men of science what were the results of their investigations. Men of science were to tell the men of the workshop what they had learnt. It was with faith and with gratitude that the workmen constituted themselves the pupils of the learned professors who were about to address them. Their dreams of human equality did not prevent their recognising and paying homage to intellectual superiority. But they thought that those who had received much from society owed much to society. M. Lavy was glad to record that the professors who held the most eminent position in the domain of sanitary science had enthusiastically placed their educational advantages at the service of the working classes. He begged the learned professors not to imagine that they would in any wise compromise themselves by mixing with the working men. They would see that labour conferred a sense of dignity, whatever might be the nature of the work or the class by which it was performed. Nor would the advantage be exclusively on the side of the workmen present. The workmen would learn much; but when, in their turn, the workmen came and contrasted what was the actual condition of their lives with what the professors of sanitary science demonstrated as necessary for healthy existence, then perhaps the latter might learn something which had previously escaped their observation. After a few graceful and grateful compliments addressed to Dr. Dujardin-Beaumetz, M. Lavy invited the lecturer to deliver his address.

Dr. Dujardin-Beaumetz succeeded, with admirable tact, in explaining the technicalities of nutrition in such a manner as to be intelligible even to the simplest members of the audience. He first explained that nutrition depended on a sufficient supply of three chemical groups of substances. For a man at absolute rest 129 grammes of nitrogenous substances, 410 grammes of carbo-hydrates, and 35 grammes of fats were required. If the food-supply of Paris were examined, it would be found that it consisted of 120 grammes of nitrogenous substances, 330 of carbo-hydrates, and 70 of fats per head, which was not far from the theoretical amount considered necessary. This conclusion is, we presume, due to the including of children, infants, &c., in the number of the population, because the lecturer also explained that the French workman, when engaged in hard physical labour, required 190 grammes of nitrogenous matter, 600 grammes of carbo-hydrates, and 90 grammes of fats. The lecturer explained how much more heat was expanded when working, and greatly amused the audience by insisting that the human body was a very bad machine, inasmuch as it consumed nearly all its heat for its own maintenance, and barely spared more than one-fifth of its heat for the purposes of work. After describing the process of starvation and the evils of overeating, he declared he did not believe in vegetarianism, excepting in hot climates. Wherever in cold or temperate climates meat was given, more work was produced. In spite of the doctrine so widely propagated that people could not be virtuous on beefsteaks, he thought that much of the success and energy of the British race was due to the fact that they were the most carnivorous people in Europe. With regard to alcohol, Dr. Dujardin-Beaumetz did not consider that it supplied heat. It was not an article of food, but it did act on the nervous system. It was a useful stimulant, but also a dangerous stimulant, for it produces inflammation and irritation wherever it passes. Finally, he was glad to note the growing preference given to coffee and tea, which stimulated the action of the heart and were far less injurious. The lecturer, having explained the nutritive qualities of various common articles of diet and how they could best be combined, insisted that it was not only necessary to have the required food, but it must also be digested. This latter problem must be solved by the housewife. Dr. Dujardin-Beaumetz was especially applauded when he showed that practical experiments demonstrated that more work was done in less time when better and more food was given. This had been proved more particularly when dealing with the mining populations. In conclusion, the learned professor thanked the Labour party for the initiative they had taken in organising their Sanitary Congress, and was sanguine that good results would ensue.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 5572 births and 4080 deaths were registered during the week ending April 16th. The annual rate of mortality in these towns, which had been 22·2 and 23·3 per 1000 in the preceding two weeks, declined again last week to 20·9. In London the rate was 19·4 per 1000, while it averaged 21·9 in the thirty-two provincial towns. The lowest rates in these towns were 13·2 in Burnley, 14·0 in Portsmouth, 14·2 in Croydon, and 15·1 in West Ham; the highest rates were 25·4 in Halifax, 25·9 in Sunderland, 27·0 in Manchester, 28·1 in Liverpool, and 28·3 in Salford. The 4080 deaths included 495 which were referred to the principal zymotic diseases, against 427 and 493 in the preceding two weeks; of these,

177 resulted from measles, 173 from whooping-cough, 50 from diphtheria, 43 from diarrhœa, 32 from scarlet fever, 19 from "fever" (principally enteric), and 1 from small-pox. The lowest death-rates from these diseases were recorded in Brighton, Portsmouth, Plymouth, and Halifax, while they caused the highest rates in Huddersfield, Sunderland, Swansea, and Sheffield. The greatest mortality from measles occurred in Leicester, London, Birmingham, Sheffield, Liverpool, and Huddersfield; from scarlet fever in Cardiff; from whooping-cough in Salford, Sheffield, Manchester, Bolton, Sunderland, and Swansea; and from diarrhœa in Birkenhead. The mortality from "fever" showed no marked excess in any of the thirty-three large towns. The 50 deaths from diphtheria included 32 in London, 3 in Salford, 3 in Newcastle-upon-Tyne, and 2 each in Portsmouth, Manchester, and Sheffield. A fatal case of small-pox was registered in Cardiff, but not one in any other of the thirty-three towns; 45 cases of this disease were under treatment in the Metropolitan Asylum Hospitals, and 11 in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1296, against 1227 and 1289 on the preceding two Saturdays; 146 new cases were admitted during the week, against 139 and 166 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding four weeks from 523 to 403, further fell last week to 348, and were 75 below the corrected average. The causes of 71, or 1·7 per cent., of the deaths in the thirty-three towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Sunderland, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Salford, Blackburn, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·2 and 24·1 per 1000 in the preceding two weeks, declined again to 22·5 during the week ending April 16th, but was 1·6 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·3 in Paisley and 15·6 in Leith to 25·5 in Glasgow and 27·5 in Perth. The 625 deaths in these towns included 24 which were referred to whooping-cough, 18 to measles, 10 to diphtheria, 9 to diarrhœa, 8 to "fever," 4 to scarlet fever, and not one to small-pox. In all, 73 deaths resulted from these principal zymotic diseases, against 65 and 66 in the preceding two weeks. These 73 deaths were equal to an annual rate of 2·7 per 1000, which slightly exceeded the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 24 and 30 in the preceding two weeks, declined again to 24 last week, of which 17 occurred in Glasgow. The deaths referred to measles, which had been 15 and 14 in the previous two weeks, rose to 18 last week, and included 17 in Glasgow. The 10 fatal cases of diphtheria considerably exceeded those recorded in any recent week; 5 occurred in Glasgow and 3 in Dundee. The deaths referred to different forms of "fever," which had been 8 and 5 in the preceding two weeks, rose again to 8 last week, and included 5 in Glasgow. The 4 fatal cases of scarlet fever corresponded with the number in the previous week. The deaths referred to diseases of the respiratory organs in these towns, which had been 158 and 160 in the preceding two weeks, declined last week to 130, and were 12 below the number in the corresponding week of last year. The causes of 62, or nearly 10 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the preceding three weeks from 40·1 to 33·0 per 1000, further fell to 30·6 during the week ending April 16th. During the thirteen weeks of last quarter the death-rate in the city averaged 38·4 per 1000, the rate for the same period being 28·2 in London and 19·8 in Edinburgh. The 205 deaths in Dublin during the week under notice showed a decline of 16 from the number in the preceding week, and included 14 which were referred to measles, 6 to "fever," 5 to whooping-cough, 2 to diphtheria, 2 to diarrhœa, and not one either to small-pox or scarlet fever. In all, 29 deaths resulted from these principal zymotic diseases, equal to an annual rate of 4·3 per 1000, the zymotic death-rate during the same period being 3·0 in London and 1·2 in Edinburgh. The fatal cases of measles, which had been 24 and 23 in the preceding two weeks, further declined to 14 last week. The deaths referred to different forms of "fever," which had been 1 in each of the previous three weeks, rose to 6 last week, with one exception a higher number than in any week of this year. The 5 fatal cases of whooping-cough exceeded by 2 the number in the preceding week; and the 2 deaths referred to diphtheria were the first recorded in the city since the middle of January last. The 205 deaths in Dublin last week included 25 of infants under one year of age, and 52 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from the numbers in the preceding week. Seven inquest cases and 7 deaths from violence were registered; and 54, or more than a fourth, of the deaths occurred in public institutions. The causes of 21, or 10 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

Surgeon-Captain A. P. Blenkinsop is under orders for India.—Surgeon-Captain F. P. Nichols has been posted to the Secunderabad District, Madras command.—Surgeon-Captain W. Hallaran has been appointed to Bangalore, and Surgeon-Captain F. W. C. Jones to Mhow District, Bombay command.—Surgeon-Captain J. J. C. Watson has joined Aldershot, for duty, on arrival from Singapore.—Surgeon-Lieutenant Mitchell has been posted to Devonport.

Correspondence.

"Audi alteram partem."

THE OPIUM QUESTION.

To the Editors of THE LANCET.

SIRS,—I trust that it will not be considered an unkind reflection on the 5000 signatories of the anti-opium manifesto to suggest that there is probably a confusion in their argument where a clear distinction ought to be drawn. It arises from a certain ambiguity in the use of the word drug. On the abstract principle that any drug which has poisonous properties should be sold only under the regulations of the Pharmacy Act there is little dispute. On the practical point whether it is expedient that opium shall be sold in the countries to which it is indigenous only as a poison, experts of the highest authority give a negative answer. If we consider the subject medically we find that Sir Joseph Fayrer, Sir George Birdwood, Sir W. J. Moore, and many others well qualified to judge, affirm decidedly that the habitual moderate use of opium is not injurious, and that they "see no reason for abrogating the present regulations concerning opium in India." From the administrative standpoint we read that the Indian Government finds it to be the "unanimous opinion of its responsible officers that it is impossible to devise any machinery by which the consumption of opium could be suppressed, while the attempt to enter upon any such policy of suppression would involve gigantic evils" under the wholly different conditions of life and society in India compared with those in England. These evils are connected chiefly with the impossibility of preventing smuggling and illicit consumption, with the certainty of increasing the use of deleterious drugs, with disaffection caused by interference with national habits, and with revenue difficulties. If we look more to moral considerations we find that the large majority of Chinese opium-smokers are respectable people of the better class and well-behaved labourers, while carefully authenticated statistics of the frequenters of the Bombay smoking houses show that, "at the fewest, 70 per cent. are regular craftsmen and labourers." Mr. James, of the Bombay service, although opposed to the practice of smoking among Indians, testifies, "from his own observations when travel-

ling in the north of China, that opium smoking, in 99 cases out of 100 in China, is a harmless habit, like cigar smoking among Europeans."

To recur to the working of the abstract principle. Let us suppose that a European nation were under the rule of a Mahomedan power, and that, acting on principle, this Government decreed that alcohol, being a poison, should be sold only for therapeutic purposes. With what feelings would the ordinary "native" look upon the prohibition of taverns, beershops, and houses of public entertainment? Now consider the Mahomedans of India and the Chinese. They have not malt and hops, and they have not vineyards. Are we to prohibit their chief luxury for the sake of an abstract opinion, and because some enthusiasts picture imaginary evils? Rice, fruits, sweetmeats, and tea—are the races of the East to be limited to these alone? We cannot judge of the effect of habitual moderate use of an indigenous drug without seeing the conditions under which it is employed; but perhaps it will bring the question more home to English readers if we advocate the claims of a society for the total suppression of the trade in alcoholic beverages. This is more urgently wanted, more philanthropic, and equally practical with the scheme of the Society for the Suppression of the Opium Trade. We demand, in the first place, that our Government shall cease to derive any revenue from such a harmful drug as alcohol. We demand that our authorities shall not sanction by licence the infamous sale of a poison which has wrought incalculable harm. We can point to the multitudes in the East of the Mahommedan creed who do without spirits, and remark that even the millions of China produce very few drunkards. Why should not our Government stop the vice which reduces the morality of the public streets below the level of those of Eastern barbarians? If anyone wishes to know something of the issues involved in the opium question, let him procure the *Journal of the Society of Arts* for April 1st and the Blue-book on the Consumption of Opium in India, C. 6582, 1892. Dr. Watts' article on "East India Opium" is very full and instructive, and is published by Messrs. Eyre and Spottiswoode.

I am, Sirs, yours faithfully,

Watford, April 12th, 1892. W. D. SCOTT, M.D.

OPERATION FOR SPASMODIC TORTICOLLIS.

To the Editors of THE LANCET.

SIRS,—In an important annotation upon the subject of spasmodic torticollis in THE LANCET of March 26th you have directed the attention of your readers to the operative measures at present most relied on for its relief. Nerve stretching and nerve section having failed to have ever given more than temporary relief, the more drastic method of nerve excision and removal has been adopted; and as, like its predecessors, it is supremely empirical and unsupported by any pathological justification, it must also prove a failure. "Surgery," as Dr. Goodhart said, in his Harveian Lecture, "can happily accomplish now much of what it undertakes, but it needs to remember that it has not yet attained to the enucleation of the neurotic constitution. Operations of this kind are on a par with some of those on a painful kidney or the destruction of Meckel's ganglion for tic; they are conspicuous for the failure of those higher and more fundamental arts of treatment that should have lifted the patient over this necessity." The narrative of Keen's new operation for wry neck, and that of sympathisers nearer home, read so painfully like vivisection, from which even the inferior animals are saved by legal enactment, that such sections and dissections should not be sanctioned by the profession save as the *dernier ressort*, and after all the other resources of civilisation had been exhausted. As I have not observed in our medical periodicals any reference to a simple yet effectual plan of treatment adopted in an obstinate case of spasmodic torticollis by that eminent neurologist, Dr. Morton Prince, physician for nervous diseases to Boston City Hospital, U.S., and published in the *Boston Medical and Surgical Journal* of October 14th, 1886, I have to request the favour of its republication in your influential journal. Dr. Prince, taking for his text the title of an article which appeared in THE LANCET of July 12th and December 6th, 1884—viz., "Tenderness of the spine in health and disease, and the therapeutic effects of blistering over the region of the fourth and fifth dorsal vertebræ"—communicated to the Suffolk Medical Society a paper detailing his experiences of the subject, and among other successful results of the treatment he mentions one of spasmodic torticollis as follows:—"The most strikingly successful case was that of a woman of about thirty to thirty-five years of age, who had been under treatment in the surgeon's room at the dispensary for about four or five weeks without any improvement; she was finally brought to me. At this time she complained of great pain and tenderness in the back of the neck, the pain shooting upwards over the back and sides of the head. The muscles of the back were stiff, almost rigid, the head being in one position. There was great tenderness over the cervical vertebræ, and the slightest jar on the top of the head or movement of the head caused intense pain; indeed, it had been thought there might be caries of the vertebræ, especially in view of the physical condition of the woman, which was that of anæmia and debility. Her expression was indicative of prolonged suffering; there was also enlargement of the submaxillary glands. Finding also tenderness over the fourth and fifth dorsal vertebræ, I directed that a blister be placed over that region. The next day the woman returned, presenting an entirely different picture. The pain and tenderness were gone, the motion of the head was natural, and the look of suffering had disappeared from the face. Of course the pleasure exhibited by the patient at being at last relieved from pain was what might have been expected. She afterwards had some trouble with the enlarged glands, but the above symptoms never returned. I saw her about a year afterwards, when she stated she had had no return of the symptoms. Two other cases of the same character, but of less severity, were equally successful. One was that of a man whose surprise and delight at his sudden cure were truly comical. I have tried the treatment in one case only of vomiting of pregnancy, when it was eminently successful." He concludes his paper with this sentence: "Decided and beneficial effects may often be obtained by blistering over the fourth and fifth dorsal vertebræ in various neuroses."

I am, Sirs, yours faithfully,

ALEXANDER HARKIN, M.D., F.R.C.S.

Belfast, April 2nd, 1892.

SMALL-POX TRAMPS: WHO IS RESPONSIBLE?

To the Editors of THE LANCET.

SIRS,—I beg to lay before you the following case:—A "tramp" walked into the waiting-room of an infirmary the other day and stayed there until the house surgeon came in, who instantly diagnosed the case as one of small-pox; this was confirmed by other members of the staff soon after. The fact was then announced to the committee, which was at the time sitting, who immediately communicated it to the medical officer of health. This occurred about one o'clock P.M. The medical officer of health, after consultation with some members of the Town Council, decided that the sanitary authorities should not be called upon to take charge of the case; and the sick man was allowed to stay at the infirmary until the evening, when the relieving officer was requested to take him to the workhouse. He replied he had instructions not to do so, the sick man being "no pauper until he sought relief," and he declined to do anything in the matter, both the sanitary and the parochial authorities thus throwing the responsibility on the infirmary. A consultation was consequently held by two of the medical staff, who came to the conclusion that it was not consonant with the safety of other patients to admit the case into the house, there being no convenient arrangement for the treatment of small-pox. The poor man was therefore told he could not be attended to, and that the doors were open to him to go out. He took the hint and walked away. The case being one of modified small-pox, he was able to go as he had come in. In the course of the night the police took him to the relieving officer, who then took charge of him and provided him with lodgings. Subsequently the sanitary authorities stepped in. This case has caused great altercation among the authorities. I have endeavoured to state it as accurately as I can. Will you or anyone kindly inform me as to who was wrong in not taking the responsibility and not providing for the requirements of the case in the first instance?—I am, Sirs, yours faithfully,

April, 1892. A CONSTANT READER.

*** The above letter is very curious reading, after all our boasts of sanitary legislation and administration in England. We feel bound to give it insertion. It reminds us somewhat of a striking story in an old book of a man

who, in a bad plight on the road, was passed by many persons, who contrived to convince themselves that *they* were not his neighbours, and were under no neighbourly obligations to him. We shall undertake at once to close all controversy on the above subject by declaring our opinion that the sanitary authorities were the principal culprits. The pedantry of the relieving officer is bad enough—excusing himself and his masters on the ground that the actual small-pox patient had not come to his door *in formâ pauperis*, though application was made on his behalf. But the action of the sanitary authorities quite eclipses that of the relieving officer and those who gave him his instructions. We can scarcely believe our eyes in reading that the medical officer of health, after consultation with some members of the Town Council, decided that the sanitary authorities should not be called on to take charge of the case! This is very much like the responsible officers at a fire station telling an urgent messenger that *they* should not be called on to put out a fire. What are we coming to? For what do sanitary authorities exist, if not to deal with a tramp suffering from small-pox, with a thousand thanks to anybody who will announce his presence and his movements, and to take immediate and entire charge of him, and all exposed to his infection, till all risk of further spread of the disease was over? The only approach to the Good Samaritan in this case was in the authorities of the infirmary.—ED. L.

THE CÆSAREAN OPERATION: A SUGGESTION.

To the Editors of THE LANCET.

SIRS,—The risk of fatal peritonitis supervening upon Cæsarean section, especially when the fœtus is putrid, might, it appears to me, be greatly reduced if the operation were performed in two stages, instead of one as at present. Other abdominal viscera and some intra-peritoneal abscesses are commonly treated in two operations when a communication with their interior for some purpose has to be established, and I would suggest a similar method of dealing with the uterus in Cæsarean section. At eight months and a half an incision through the abdominal wall sufficiently large to admit of the withdrawal of the fœtus might be made, and the edges of the wound accurately and carefully stitched to the uterus, as to the stomach in gastrostomy. Then at full term, when adhesions around the wound had shut out the peritoneal cavity, the second operation of opening the uterus and delivering might be performed with the minimum of risk as being extra-peritoneal. I do not think the after-treatment would be rendered more difficult. Post-partum hæmorrhage could be as easily controlled as at present. The adherence of the uterus to the abdominal wall might interfere with uterine contraction and complete sub-involution—to what extent experiment alone would decide; but as adhesions between the uterus and the abdominal wall generally form after Cæsarean section, the uterus would doubtless adapt itself in some way to its new anchorage. The uterine and abdominal incisions could be closed simultaneously at the second operation, drainage being arranged for by the cervix or abdominal incision, at the discretion of the operator. Further details of the operation would have to be considered.

I am, Sirs, yours obediently,

Margaret-street, W., April 20th, 1892. J. H. DAUBER.

A CORONER ON UNQUALIFIED ASSISTANTS.

To the Editors of THE LANCET.

SIRS,—It is observed in an article in THE LANCET of the 16th inst., on the death of Miss Bradshaw at Luton, that my connexion with Mr. Beart and non-appearance in the case require explanation: First, on Saturday I was called away on private family business before Mr. Beart could communicate with me, there being, as I thought, nothing serious to attend to. Had it been possible to send to me in time for the inquest I should have been there: but the coroner did not ask for me. Secondly, Mr. Beart has worked with me for ten years, and has always called me to any serious case under his care *at once*. This he was for once unable to do, but in his evidence states that he told them to send for someone else if the patient became worse. Mr. Beart has never, to my knowledge, represented himself to be other than an unqualified man. I scarcely think even an unqualified man, after twenty-five years' successful work under very competent surgeons, could make any gross blunder. In Dunstable he has earned a local reputation in obstetric cases. His prescriptions were produced in court, and I see no evidence of malpraxis or negligence. I see that the Home Secretary, acting on the actual depositions, and not a mere newspaper report, has declined to interfere.

I am, Sirs, yours truly,

Dunstable, Beds., April 19th, 1892. F. W. D. HENSLOWE.

THE ROYAL BRITISH NURSES' ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—The application which the Royal British Nurses' Association has recently made to the Lords of the Privy Council for a charter of incorporation has led to the publication of certain articles and letters which are calculated to convey the following inferences: that there exists a body which is empowered to represent the collective opinions of the nurse-training institutions; that such a body is opposed to the petition and aims of the Association; that the register of trained nurses which is maintained by the Association is calculated to mislead the public and to be detrimental to the interests of the best class of nurses. In view of the fact that the questions thus raised will shortly be argued by counsel and judicially decided, the Association has thought it becoming to abstain from offering any specific or detailed reply; but, at the same time, it desires to make known that it is in a position to meet all such statements and implications with positive denial and effectual refutation.

We are, Sirs, your obedient servants,

CATHERINE J. WOOD,
W. BEZLY THORNE, M.D., } Hon. Secs.

THE SHOP HOURS QUESTION.

NATIONAL CONFERENCE AT MANCHESTER.

(FROM OUR SPECIAL CORRESPONDENT.)

THE Conference convoked to consider the Parliamentary aspect of the shop hours question has most emphatically confirmed and accentuated the evidence and arguments brought forward in the Reports of THE LANCET Special Commission on "Sanitation in the Shop."[1] The Conference was organised by the National Union of Shop Assistants, and met at Manchester on Easter Monday. It was thrown open to any association connected with retail trades, irrespectively of trade or sex, and whether representing the employed or the employers. Consequently the Women's Trade Union League was represented by Miss Marland, and the Master Grocers' Association of the Manchester and Salford district by four delegates. The shop assistants of Manchester, Salford, Sunderland, Newcastle, Middlesbrough, Jarrow, Liverpool, East London, Oldham, Ashton-under-Lyne, Barnsley, Leeds, Radcliffe, Cardiff, Swansea, Huddersfield, Bradford, Dewsbury, Hull, Leigh, Bolton, Wigan, Rochdale, Stockport, and Loughborough appointed delegates. Previously to the Conference the delegates of the various branches of the National Union of Shop Assistants held business meetings, where financial matters and the rules of their association were discussed and amended. Among other matters debated at this business meeting was the question of medical attendance. Complaints were made that some employers deducted 2*d.* per month from the salaries, and with this engaged a medical man to watch over the health of the assistants, and it was alleged that this arrangement was calculated to afford the shopkeeper timely warning, so that assistants could be discharged whose health was likely to fail. For about 2*s.* 6*d.* per annum per head the assistants could secure medical attendants who would not act in the interests of the employers, and this course was recommended to the various district branches; but each branch was left to do as it thought best, according to its

[1] See THE LANCET of February 27th and March 12th, 1892.

financial resources. The delegates also briefly discussed Mr. Provand's Bill, and passed the following resolution: "The National Union of Shop Assistants are unanimously of opinion that nothing will effectually reduce to a reasonable limit the hours of labour in shops but an Act of Parliament, and the Bill introduced in the House of Commons by Sir John Lubbock is the most practical of any of the schemes before the country at the present time." This resolution was accepted unanimously, and signed by all the delegates.

In the afternoon the open conference was held in a room lent for the purpose by the Young Men's Christian Association. Mr. H. J. Roby, M.P., was in the chair, and Mr. W. Mather, M.P., who is a member of the Select Committee on Mr. Provand's Bill, was also present.

Mr. Roby, M.P., in opening the proceedings, took a cheerful view of the situation, inasmuch as in the present instance the interests of the employed and of the employers were identical. Both would benefit by shorter hours. As for the public, so long as shops were open they would choose their own time; but it was not impossible for the public to shop earlier in the day. Throughout the country the movement in favour of limiting the hours of labour was spreading fast; and this was shown by the introduction of the Miners' Eight Hours Bill. On inquiring whether such limitation should be obtained by consent or by legislation, the speaker was met by loud cries in favour of legislation. He acknowledged that the tendency of the day was in favour of legislation; and such legislation was more easy with regard to the shop assistants, as it was not opposed by the employers. Mr. Roby insisted that all concerned should organise strong manifestations of opinion, and explained that Mr. Provand's view was that, while he doubted whether there was any chance of getting Parliament at present to limit the hours of grown men, a beginning might be made, as in the case of the Factory Acts, with the women, and thus Parliament would get accustomed to this principle of State intervention. At first there would be great opposition from both sides of the House to limiting the hours of adult males; but still, if they could show that such limitation was reasonable, and that the great majority of the trades concerned approved of such legislation, for his own part he thought they would ultimately succeed.

Mr. R. Davis of Cardiff, president of the National Union of Shop Assistants, then addressed the meeting on behalf of the Union. He urged that if any section of the community suffered, and were degraded physically and morally, this would not fail to affect the nation as a whole. There was danger in neglecting such matters. Mr. Provand had proposed to fix the maximum number of working hours per week. Sir John Lubbock would reduce the hours of work by allowing the majority of shopkeepers to fix the time of closing at night. At present they were constantly beaten by a small minority of shopkeepers who would not close early. At Swansea a canvass, undertaken conjointly by the Trades Council and the master shopkeepers, had shown that 98 per cent. of the shopkeepers, even in the poorest quarters, were in favour of early closing. For the last twenty years they had enjoyed the half-holiday in South Wales; yet, though so long established, this was only maintained by constant advertising and agitation. They wanted the law to render them secure in the possession of what they had so much trouble to maintain. As for the demonstrations of opinion which Mr. Roby desired, it was impossible for shop assistants to get employment without a reference, and many employers gave bad references to assistants who took public action. The master grocers of Liverpool had draughted a Bill in favour of closing at 7 P.M., and at the Master Grocers' Congress, recently held at Birmingham, the proportion of grocers in favour of early closing was in the ratio of 10 to 2. The degradation and the misery of shop assistants were such that parents were now beginning to make skilled artisans of their children instead of sending them to shops. Instead of working twelve hours a day as a shop assistant for 3*s.*, it was better to work eight hours a day for 6*s.* as a skilled artisan. The result was that experienced and really good shop assistants were becoming more and more scarce. A lower class of persons worked in shops, and these were more easily victimised. He also urged that public health and public morality had much to gain by early closing. When wives go out at night to shop the husbands, not caring to be left at home alone, resort to the public house. The women, particularly if they have made a good bargain in their shopping, spend in the public-house what they have saved while shopping. Thus on Saturday nights public-houses are frequented by women who never go there on any other day of the week. He was convinced that if the shops were closed early there would be much less drunkenness.

Mr. John Williams, of the Master Grocers' Association, Manchester, moved that "a clause be inserted in Mr. Provand's Bill to enable the shopkeepers and the shop assistants to secure a weekly half holiday by local option, and that powers be granted to the municipal authorities to enforce this clause." He was in favour of signing away a liberty they did not want to secure a liberty they did want.

Mr. Johnson, general secretary of the National Union of Shop Assistants, seconded the resolution, and protested that in the headlong competition in trade the moral and material interests of the shop assistants were ignored, and—whereas some care was bestowed to preserve goods or wares—it did not matter how soon a shop assistant died. They were disfranchised, they were condemned to celibacy, and deprived of all leisure and of all joy.

Mr. Duncan of Leeds stated that there were about a thousand shops where some 4000 assistants were employed in his town. They were all deprived of the weekly half-holiday because only six shops refused to close. One of these six shops belonged to a proprietor who had declared that, though three days a week would suffice to effect all his sales, still he would keep open every day and all day till the Legislature interfered.

Miss Marland, on behalf of the Women's Trade Union League, strongly opposed separate legislation for women, and approved of Mr. Provand's Bill on condition that males were included in its operation.

Mr. Mather, M.P., explained the very limited scope of Mr. Provand's Bill, and insisted that such Bills were dead letters without compulsory inspection. That was why the Act of 1886 had been of no use. He thought the public, the shopkeepers, and the shop assistants would have no difficulty in coming to a harmonious understanding, for it was a question affecting the homes of the people themselves which could not in any way be influenced by considerations of foreign competition. If the hours had been reduced for workmen who did compete with foreign nations, how much easier was it to reduce the hours of shop assistants who did not compete on foreign markets? He had learnt much by assisting at the conference, for he had not previously realised how so small a minority of shopkeepers defeated efforts at reform. The Select Committee of the House of Commons had had great difficulty in getting witnesses who could give a tangible and sufficient body of evidence. Yet the evidence already collected was enough to show that somebody had terribly blundered in not letting it be known years ago that such inhuman practices had prevailed in certain parts of the country—as, for instance, the employment of young women for ninety hours per week. He almost dreaded to look at the medical evidence. He believed that it would reveal a state of things of which they would be heartily ashamed. Undoubtedly the Parliamentary investigation would give legislation better information, and shop assistants would have more friends in court in future. He urged that it would be a very good thing if the action of the Select Committee might be enlarged so as to deal with Sir John Lubbock's Bill.

Mr. Horsman (Manchester) explained that at Ashton-under-Lyne 211 tradesmen were prevented from giving the half holiday by fifteen tradesmen who persisted in keeping open their shops. In Manchester close on 3000 signatures had been affixed to a petition in favour of early closing.

Mr. Biggs stated that at Bradford 1187 tradesmen out of 1200 were in favour of the weekly half-holiday, but had to keep open on account of this small minority against the proposal.

Mr. Mathers, M.P., now interposed, stating that he wished to know definitely whether or not the Conference approved of Mr. Provand's Bill.

Mr. Horsman (Manchester) said they did not see much in the Bill, and were not enthusiastic in its support.

Mr. J. Macpherson (East London) said there were two blots on the Bill. First, it left out the men; and, secondly, if inspection was to be optional instead of compulsory, the Bill was a mere sham. If the hours of women alone were to be restricted the employers would engage men

instead, and many thousands of unfortunate girls would be thrown on to the street.

Mr. Davis, on behalf of 1200 organised shop assistants of Wales, of which one-sixth were women, said he did not approve of Mr. Provand's Bill.

Mr. Mathers, M.P.: "Then you all agree in condemning Mr. Provand's Bill?" At which there were some cries of dissent, one delegate rising to protest that, though the Bill was incomplete, insufficient, and unjust in its special treatment of women, still he would prefer such a Bill to no legislation at all. Several delegates seemed to agree with this opinion. The Conference then unanimously adopted the resolution introduced by Mr. Williams, as mentioned above, which suggests the amendments necessary to render Mr. Provand's Bill satisfactory, together with another resolution, to the effect "that all *employés* in these industries shall come within the jurisdiction of this Act, without distinction of age or sex."

Mr. Rowe of Manchester then read a paper on the Living-in System. For motive of economy, convenience, and discipline shop assistants were made to board on the premises. By this means they were disfranchised as Parliamentary voters, and were kept under an iron rule. They were harassed by any number of petty regulations, had no sense or enjoyment of home; the sanitation was vile, the table a snare and a delusion. The food was coarse; they were constantly disturbed at their meals to serve customers. It was a survival of the truck system in its worst form. What employers called plain fare meant workhouse rations, and the assistants were always obliged to be in by 10.30 P.M. No body of workmen would consent to be thus handed over body and soul to their employers, particularly as the acuteness of competition was rendering the employers more and more inhuman. The rate of wages was calculated on the basis of bare subsistence for a single man. Consequently, if a shop assistant wished to marry, he was discharged from his employ. The speaker protested that celibacy was contrary to the scheme of nature, and claimed for the shop assistants their natural right to marry. Sir Bartle Frere had raised the indignation of the British public by relating that the Zulu warriors lived in enforced celibacy. The British public were now invited to consider the condition of the assistants who worked in shops, which, in consequence of the enforced celibacy, had become hotbeds of immorality. He would not insist, he would draw the veil over this question; but if our social conditions were such as to render vice so attractive and virtue so repulsive, nature would surely take her revenge. Shop assistants were no worse than any other class, but, like others, had to yield to the force of surrounding influences. If these influences were exceptionally bad, the result would be evil in due ratio. Why also did it happen that there were so few elderly men among the shop assistants? The fact was that old men were flung out to swell the army of the unemployed. Members of Parliament knew little or nothing of their position; this was proved by the recent debates. Shop assistants had no votes, nor did their case present features out of which party cries could be contrived. But with the abolition of the living-in system they would acquire votes, and then redemption would draw nigh. Legislation must come; it was inevitable; the only question of doubt was how many more generations of shop assistants it would be necessary to kill off before such legislation became effective.

Mr. Davis was anxious the Conference should recognise that, if their interests had been neglected in some quarters, the press, in any case, had done a great deal to help the shop assistants.

Mr. Lomax of Loughborough had worked in a shop where during four years he never had an opportunity of putting on either his coat or his hat, except on Sundays. He left this place because he could not eat rotten potatoes. He had offered to eat half these potatoes if the employer would eat the other half, but this challenge was not accepted. At another shop he had good food, but not enough, so that his health broke down, and he went to work in the provinces. There, in one house, he found the food "was only fit for manure." One of the female assistants died, and, after her death, a bill was brought in for the food she had been obliged to purchase outside.

Mr. Almgilt of Barnsley related that at one of the most important shops in Sunderland, out of fifty assistants, only twenty were able to eat the food provided; they had to send out for food at their own expense. And the sleeping accommodation reminded him of what the third-class railway carriages used to be fifty years ago. At Hull he had found matters worse. There, after working for six months, he was so ill that he had to lie up for four months; net result, two months' profits. At Leeds he was also badly treated, but at Barnsley he had found a place where he had been able to build up his health again. But even here he had just lost a good companion, a fellow shop assistant, aged twenty-six, who had been dismissed for no other reason than that he was about to marry.

Mr. Macpherson (East London) thought that if male and female assistants were allowed to marry, they would become more settled and take a greater interest in the business. As it was, in many shops male and female assistants were dismissed if they were known to be in each other's company.

In answer to a question from Mr. Roby, M.P., Mr. Davis explained that in the provinces shopkeepers calculated the value of board and lodgings at 10*s.* a week; but he felt convinced that the board generally provided did not cost more than from 4*s.* 6*d.* to 7*s.* 6*d.* per head per week.

Mr. Jones described a firm which employed 200 assistants and only allowed their housekeeper 9*d.* per head per day for the food supplied. Was it possible that full-grown men, working hard all day, could be kept in a wholesome manner on 9*d.* per day?

The Congress then carried unanimously a resolution to the effect that "the living-in system should be abolished." This concluded the business, and after the usual votes of thanks the Conference adjourned.

It will be seen by the opinions expressed and by the evidence incidentally given in the course of the speeches briefly summarised that the views expressed and the facts described in the Reports of our Special Commission are fully borne out. The long hours, the want of freedom, the bad food, the bad sanitation—these are the main grievances. Legislative interference on behalf of the men as well as the women is considered the only means by which the moral, the material, the sanitary, and the social condition of the shop assistants can be improved.

Manchester, April 19th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Medical Appointments.

AT a meeting of the board of guardians, held on the 20th inst., Drs. T. S. Short, J. O. W. Barratt, and A. H. Carter were elected visiting physicians to the infirmary. Some interest has attached itself to these appointments, since it was with a view to permitting their officers to apply that the rules of the General Hospital were lately altered. A wider range of choice is thus given to the guardians, along with the opportunity of securing the services of the best candidates. The first of the above-named gentlemen is at present assistant physician to the General Hospital, the second holds no hospital appointment, and the third is senior physician to the Queen's Hospital. The contest for the appointment of physician to the General Hospital, owing to the resignation of Dr. Wade, promises to be a close one, and is giving rise to some excitement. The election will take place on May 4th, and the elective body consists of the committee, *plus* fifty subscribers chosen by ballot. Dr. Foxwell, physician to the Queen's Hospital, and Dr. Wilson and Dr. Short, assistant physicians to the General Hospital, are at present the only candidates. Various interests are brought to bear in support of the claims of each, and the voting promises to be close.

The Workhouse Water-supply.

The special committee appointed to deal with the water-supply have issued their report. It states that they decided to invite specifications and tenders from practical well-sinkers for securing a daily supply of 150,000 gallons of water. In February it was reported that 70,000 gallons were obtained from the well sunk, and in addition 40,000 gallons from the corporation. It was recommended that another borehole should be put on at the bottom of the present well, at a cost of £500 or £600. The committee did not advise this, preferring to give the present arrangement a fair trial, as the quantity was increasing. The corpora-

tion charged 6d. per 1000 gallons, the amount used being 130,000 gallons a day; so it was expected that a saving would be effected by the present plan of obtaining the supply.

Singular Deaths.

An inquest was lately held on the body of a man aged fifty-six, whose death was said to have been aggravated by taking large quantities of chlorodyne. He began by taking a few drops, and lately took a whole bottleful at once. He was found unconscious, and died soon afterwards. The heart was found to be fatty and atrophied. The second case was that of a child aged four years, who died from inflammation of the brain, caused by the presence of a bean in the ear. Attempts had been made to extricate this without success, once under chloroform. Some censure was administered to the father of the child for not keeping the deceased under medical care, after having been told to do so.

Birmingham, April 20th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Assizes.

THOUGH the number of prisoners was large, and the nature of the crimes with which they were charged was grave, this last assizes has passed without any death sentence. The most serious feature in the calendar was the large number of criminal assaults upon women and children, in some instances by several men acting in company. Very severe sentences were passed upon those who were convicted, and it is to be hoped that these will have an effect in deterring others from committing such crimes.

A Drunkard's Tercentenary.

A woman whose name betokened her Irish nationality was brought before the magistrate on the 16th inst. for the 299th time! She was fined 10s. and costs, or ten days' imprisonment. It is almost certain that the wretched woman will complete what has been ironically termed her tercentenary. It is to be lamented that there is not some more satisfactory method of dealing with this and similar cases.

The Weather and the Easter Holidays.

In Liverpool, as elsewhere, the weather which prevailed on Easter Monday was wintry in the extreme, in spite of which there were a large number of cheap trippers who braved the miseries of a ferry passage under such inclement auspices. Although there was a falling off in the total number from that of last year, it was still very large, and it is satisfactory to learn that there have been no casualties.

April 20th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Durham Colliery Doctors and the Strike.

A DURHAM "Colliery Doctor" writes a strong letter to one of our local papers, in which he shows very clearly the heavy loss which is sustained by the colliery surgeons, owing to the loss of the miners' fortnightly subscriptions, which are deducted at the office, when working, from their pay. It is computed, he says, that 70,000 men are on strike, whose subscriptions to the doctors amount to £1750 per fortnight. To this must be added losses from non-payment for confinements, vaccination, &c., and further non-payment by small tradesmen and others dependent on the men; so that the total loss to the doctors cannot fall short of £2500 per fortnight. The worst of it is, the doctor is expected and does attend all these people at present free, and has besides to keep up his usual expenses of assistants, drugs, servants, and horses just the same as if he was being paid. "A Colliery Doctor," as a remedy, suggests that the men may be asked to pay up the arrears by degrees when they get to work, which arrears, with their consent, might be stopped at the office as before. He believes that this is a fair proposition to make to the men, and he believes that they will accede to it. He further asks for a meeting of colliery doctors to be held in Durham next week to bring this important matter before the men. He also fears that there is much work before the colliery doctors in the coming season, owing to the insanitary condition of the colliery villages from overflowing of ashpits, the effects of inferior food, insufficient clothing, &c. As bearing this statement out, I see that the medical officer of health for Willington has reported an outbreak of scarlatina there, and reports that the ashpits in the colliery rows were overcrowded with refuse. At the Durham School Board meeting, too, a serious outbreak of measles is reported; one of the schools was closed till May 1st, about seventy of the scholars being ill.

North Riding Infirmary, Middlesbrough.

The annual report of the North Riding Infirmary at Middlesbrough has been presented to the meeting of governors, and it shows that 614 new patients had been admitted, making a total of 663 who had received treatment. The revenue fell short owing to the decrease in workmen's subscriptions, consequent on closing of works. Reference is made to the loss the infirmary sustained through the deaths of Drs. Ketchen and McCuaig. The late Duke of Devonshire had also proved himself a friend of the institution.

Death of the late Treasurer of the Cumberland Infirmary.

The death of Mr. William Parker, J.P., of Careton-hill, is announced. Mr. Parker, who was about seventy-five, died rather suddenly from cerebral hæmorrhage after two days' illness. He was until recently treasurer of the Cumberland Infirmary at Carlisle, and entirely through his efforts the jubilee fund of £2500 was collected for the institution. Mr. Parker was a great favourite in Cumberland; he was a thorough sportsman, and a good shot—in fact, a type of the fine old English county gentleman.

Newcastle City Lunatic Asylum Extension.

The competitive plans for the important extensions of the City Lunatic Asylum, which will practically make it a new building when carried out, have been exhibited for some days in our Town Hall, and have attracted many visitors. The plans of Mr. J. W. Dyson of Newcastle have received the first premium, and will be adopted for the buildings.

Seaside Summer Camp for Poor Boys.

The annual report of this most deserving association, which provides a seaside holiday for poor boys every summer, has been issued. It shows that 209 poor boys, hailing in about equal proportions from Newcastle and Gateshead, were afforded a pleasurable and health-giving holiday in the camp on Hartley Links, which was open during the last season for 133 days. There had been no serious sickness in the camp, and there were only six cases of flagrant disobedience and insubordination entailing dismissal.

Ambulance Work in the North.

At Jesmond the Mayor and Mayoress of Newcastle have presented certificates to the members of the ambulance class who have passed the examination in first aid, under the auspices of the St. John Ambulance Association. Dr. Aitchison, the instructor, at the same time received a presentation from the classes.—At Hartlepool, the Mayoress has presented the certificates and medallions to the successful members. Dr. Ainsley, the instructor, was highly complimented on his work.—At Gainford, Durham, Dr. Ellerton of Middlesbrough examined and passed fifty-two candidates for the St. John certificates of efficiency, and a vote of thanks was given to Dr. Hickey for his kindness in giving the lectures, and the painstaking way in which he had instructed the classes.

Sudden Death of a Middlesbrough Cyclist.

On Saturday morning a young man aged twenty-two died at a hotel at Great Ayton in Cleveland from syncope brought about by over-exertion and cold. He was taken ill the previous night after a ride of forty miles. Two local medical men were sent for, and remained with him all night until his death.

Mr. Page's case of pyloroplasty, or Mikulicz's operation, at the Royal Infirmary, which I noted in this letter on March 15th, has done well, and the man has gained two stones in weight.

Newcastle-on-Tyne, April 20th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Graduation Ceremony at Edinburgh.

ON Thursday of last week the spring graduation ceremony at Edinburgh University took place. Among those presented for the honorary degree of LL.D. was the Hon Sir Charles Tupper, of Nova Scotia, who is a Doctor of Medicine of Edinburgh of 1843. Several gentlemen received the degrees of M.B., C.M., and M.D., but most of those presented were graduates in Arts, Science, or Divinity. Professor Carystal, of the chair of Mathematics, delivered the address to the graduates, taking for his theme the changes in the Arts curriculum and the influence and aim of University education.

Inspection of Food in Edinburgh.

Two additional food inspectors for the city are to be appointed, and it is satisfactory to note that the Public Health Committee have decided that these new officials are to be qualified veterinary surgeons. The salary of each inspector is to begin at £125 per annum.

Victoria Infirmary, Glasgow.

This infirmary is certainly not falling behind in material prosperity. In addition to the various large sums which have recently been received by it, a sum of about £35,000 now reverts to it through the death of a lady, widow of the late Lieutenant-Colonel Sharp. The Victoria Infirmary is the youngest of such institutions in Glasgow, and though some of those most experienced in such matters had some misgivings as to the propriety of adding to the number of our medical charities, it seems clear from the support it has received, and the amount of work being done within its walls, that it justifies its claim to be recognised as one of the established and useful charities of the city. The new buildings in connexion with the infirmary are progressing satisfactorily. One of them, the Nurses' Home, in which the nursing staff will be lodged, is finished, and was opened to-day (April 19th) by Mr. and Mrs. Renny Watson, who had made a donation of the sum necessary to furnish the home in commemoration of their silver wedding. The other building, consisting of a new pavilion, which will double the accommodation within the infirmary, is also making progress, and should be ready for occupation early next year.

Health of the City of Aberdeen.

The following cases of zymotic diseases were notified to the medical officer of health last week: Measles, 1; scarlet fever, 6; diphtheria, 5; typhus fever, 3; whooping-cough, 39; erysipelas, 6—total 60, being a decrease of 24 as compared with the previous week. There were no cases of small-pox, typhoid fever, or puerperal fever. In his report for the month of March, Dr. Hay states that the total death-rate (23·71 per 1000 per annum) is somewhat higher than the preceding month, and is considerably higher than in March of last year. As regards the mortality at different periods of life, the death-rate among aged persons has been exceptionally high, amounting to an annual rate of nearly 11 per cent. The death-rates at the other age periods show no marked deviation from the normal. The mean age at death was higher than usual, being 39·7 years, as against 36·6 in the preceding month, and 35·3 in March of last year. Compared with the corresponding month in the previous ten years, the past month exhibits a total death-rate which is higher by 1·85 per 1000 than the average. Cases of typhus fever have shown a marked increase during the month, 16 as against 7 in February. Cases of typhoid fever numbered 20 (which is unusually large) during the past month, as against 11 in February. Diphtheria also showed an increase, 10 cases being reported, of which 8 terminated fatally. Erysipelas showed a distinct decline, and there were no cases of puerperal fever.

Resignation of Professor Ogston from the Staff of the Aberdeen Royal Infirmary.

The announcement on April 12th of the resignation of Professor Ogston came as a surprise to all. Universal regret is being expressed, and a hope that such a disaster to our medical school may be averted is entertained. A largely-attended meeting of medical men, representative of the city and county, was held on April 18th at the residence of Dr. Ogilvie Will, for the purpose of considering what steps should be taken to induce Professor Ogston to reconsider his determination to resign the office of surgeon to the Aberdeen Royal Infirmary. Dr. Ogilvie Will presided. The following resolution, proposed by the chairman, and seconded by Dr. Jackson, was unanimously carried:—"That this meeting regards Dr. Ogston's withdrawal from the staff of the Aberdeen Royal Infirmary as a serious and almost irreparable loss to the institution, to the University, and to the general community; and that it pledges itself to use every effort to induce Dr. Ogston to continue in the office which he has for so long conspicuously adorned."

Another resolution was proposed by Mr. Profeit, Balmoral, seconded by Dr. MacGregor, and unanimously agreed to:—"That a deputation from this meeting be appointed to wait on the directors of the Aberdeen Royal Infirmary for the purpose of urging on them the extreme advisability of their using every means in their power to retain Dr. Ogston's invaluable services for that institution." The deputation appointed consisted of Dr. Ogilvie Will, Dr. Jackson, Mr. Profeit, and Dr. MacGregor.

An enthusiastic mass meeting of students was held in Marischal College yesterday afternoon to consider what steps could be taken with regard to Dr. Ogston's resignation. A resolution was unanimously carried expressing deep regret at Dr. Ogston's resignation, recognition of his great eminence as a surgeon and invaluable service as a clinical teacher, and begging him to reconsider his decision. A deputation was appointed to lay this resolution before Dr. Ogston, and send a copy to the directors of the infirmary.

Summer Session at Marischal College.

The summer session commenced on April 18th. There was an average attendance of students. Those commencing their medical studies now enter under the new regulations, and, therefore, begin a curriculum of not less than five years.

April 19th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Abolition of the Office of Visiting Physicians to Irish Lunatic Asylums.

THIS rule, which has recently come into operation and has caused such an outcry, was suggested, it may be stated, in a report prepared by Sir Arthur Mitchell, Mr. Holmes, and Mr. F. F. MacCabe, three gentlemen thoroughly acquainted with lunacy administration and lunacy legislation. It has been alleged that by the new arrangement an inspection from outside the resident officials becomes impossible, and that there are no safeguards as regards the management of the insane, and no person holding a position independent of the administrative officials. Those who make these statements appear to forget what has already been pointed out—viz., that each lunatic asylum is visited by governors, inspectors of asylums, chaplains, and that information could, if necessary, in many instances, be obtained from patients discharged cured, or from their friends who had visited them. Besides this, the visiting physician is replaced by a resident, who can be responsible for the proper treatment of the insane during the absence of the medical superintendent on leave of absence, and that a consultant can be called in when so desired in any case requiring his services.

Adelaide Hospital, Dublin.

It is satisfactory to learn from the recent annual meeting that the hospital is at present in a very flourishing condition. Ten new beds have been added, and the institution has now 136 beds open for the reception of patients. It is contemplated to supply a long-felt want—namely, a convalescent home, where those who leave the hospital may for some short interval be cared for before their return to work. It is hoped that the home may be built before next winter. The hospital is an excellent one, thoroughly well managed, and the expenditure, some £6000 yearly, is well recouped by the immense good done to the suffering poor.

Systematic Lectures in Hospitals.

The medical board of St. Vincent's Hospital intend making an application to the Council of the College of Surgeons, requesting them to recognise the systematic courses of lectures in medicine and surgery which the medical staff propose to deliver. They consider that these

lectures delivered in hospitals could be largely extended without any additional cost to the student. The term that no "additional cost" will be incurred is somewhat ambiguous. It may mean that the authorities of the hospital in question intend charging, in addition to the ordinary hospital fees, the sum of 6 guineas for lectures in medicine and surgery, the same as charged by the medical schools, or, happily for the student's pocket, they may remit this item altogether. The board are of opinion that a hospital is *primâ facie* the proper place to teach medicine and surgery, and state that, acting on this view, the Senate of the Edinburgh University have recently recommended to the General Medical Council that lectures in these subjects should be transferred from the medical schools to the hospitals. It is, however, very improbable that the Council of the College will see their way to grant the request of the memorialists in the matter, more particularly as it would sensibly decrease the income derived by the schools of surgery which are under the control of the College.

Kilkenny Lunatic Asylum.

A large number of the governors having resigned office in consequence of the Board of Control having purchased additional land for the use of the asylum contrary to their wishes, his Excellency the Lord-Lieutenant has forwarded a communication to these gentlemen through the Under Secretary, which has caused them to reconsider their determination, and they have accordingly resumed office. He points out that the responsibility for seeing that lunatic asylums are properly equipped in the matter of land has been cast upon the Board of Control, but he acknowledges that the law in this respect is capable of improvement, and states that the Government hope when an opportunity arrives to legislate on this and other points connected with lunacy administration.

Superannuation of Poor-law Medical Officers: Deputation to the Chief Secretary.

On Tuesday, the 19th inst., a deputation waited upon Mr. Jackson at Dublin Castle for the purpose of urging upon him the desirability of promoting a Bill in Parliament, in order to give poor-law officers superannuation amounting to two-thirds of their salaries and emoluments after thirty years' service. The deputation included representatives from the following corporations and associations—viz., Royal College of Physicians, Royal College of Surgeons, Irish Graduates' Association, Irish Medical Association, British Medical Association, and Poor-law Officers' Association. The proceedings were private—a matter to be noted, seeing that Mr. Jackson was not able to receive the deputation at first, and that it is generally believed that he is averse to the proposed Superannuation Bill. Silence under these circumstances cannot be regarded as a favourable omen, and I fear the chances of obtaining Government support in the passing of the proposed measure are very slight indeed.

The Belfast District Lunatic Asylum.

From the sixty-second annual report of the Belfast Asylum I learn that during 1891 there were 203 admissions, which, with those already under treatment, make a total of 856. There were 31 deaths and 154 discharges, leaving a total of 671. Of the 203 admitted, 163 were cases of first attack, and 40 had been treated in the Belfast or other asylums before. As there has been no decrease in the number of admissions as compared with former years, the asylum accommodation has been greatly strained to meet the exigencies of the treatment of those admitted. In their memorandum of inspection on October 12th, the two inspectors of lunatics (Dr. G. P. O'Farrell and Dr. E. M. Courtenay) say that no post-mortem examination has been held during the year; but they trust that with the proposed alterations and improvements a suitable pathological room will be fitted up, as in so great a centre of medical science as Belfast the asylum should not be behindhand in the means of scientific research connected with the study and pathology of diseases of the brain and nervous system. It has now been arranged, they say (to meet the overcrowded condition of the asylum), to build a new asylum in the county of Antrim, and the existing institution will continue to receive the patients from the city of Belfast, which will constitute a new district. I understand that the board of governors of the asylum, acting on the suggestion of the inspectors of lunatics, have decided to erect a detached hospital to accommodate fifty patients.

Ballymena Union Hospital.

For the post of medical officer of the Ballymena Workhouse, vacant through Dr. Kidd's death, there has been a very keen contest, and on the day of the election (April 16th) Mr. Davidson was appointed by one vote, 24 voting for him and 23 for his opponent.

Extraordinary Mode of Testing Rabies.

A few days ago a calf was bitten in Market-hill, co. Armagh. That it suffered from rabies was established in a primitive fashion as follows. A black hen was placed in front of the calf, and according to the local wiseacres it was expected that if the calf were mad it would become excited and plunge at the hen. In this instance the calf did act in that fashion, and those who witnessed the test were satisfied of the existence of the disease. The veterinary inspector having examined the calf afterwards, and having by a different method diagnosed the presence of rabies, the animal was destroyed.

The Guinness Trust Committee have expended £6000 in the erection of tenements close to Thomas-street, Dublin. The first block has been open since New Year's Day, and the second was opened early last month.

Mr. F. Alcock Nixon, surgeon to Mercer's Hospital and Professor of Surgical Anatomy Schools of Surgery, is a candidate for a seat on the Council of the College of Surgeons at the annual elections in June next.

Mr. Donovan has been appointed medical officer of Edgeworthstown Dispensary.

Belfast, April 20th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Protective Power of the Bacillus of Avine Tuberculosis against the Human Micro-organism.

SOME months ago, when Koch's tuberculin was the principal topic of conversation, the medical press seemed to be absorbed in the study of new remedies levelled at the giant tuberculosis. The comparative silence on the subject which has reigned for some time might have led some people to believe that the disappointment experienced at that epoch had paralysed all fresh efforts in this direction. A communication just made to the Académie des Sciences by MM. Héricourt and Richet (the last-named *savant* is still spoken of as M. Charles Richet, to distinguish him from his celebrated father, now dead and gone) disproves this conclusion. A reference to some of my previous letters will remind your readers that these twin observers had—unsuccessfully, alas!—attempted to render monkeys refractory to the invasion of human tuberculosis by the previous inoculation of the bacillus derived from the bird. Seeing this, the two *savants* turned their attention to the dog, an animal which is almost refractory to bird-tuberculosis, but very susceptible to the human variety of the disease. Four dogs were inoculated with cultures of human tubercle. Of these animals, two had previously received an intra-venous injection of bird-tubercle. The result was that the two unprotected dogs died in twenty-two days, whilst the two other animals are now, 122 days after the experiment, alive and well. It is thus fair to assume that the presence of the avine variety of the bacillus is inimical to the growth and development of the human species of that micro-organism.

Transmission by Inoculation of Chorea from one Dog to Another.

At the last meeting of the Société de Biologie, M. Richet reported that M. Triboulet, one of his pupils, had succeeded in transmitting from a choreic dog the disease to the healthy animal. The proceeding adopted was the following:—Having collected some blood supplied by a choreic dog, this was cultivated, and the fertile culture was inoculated into three other animals. One of these, which was already under the influence of the neurosis, was not perceptibly affected in so far as the movements were concerned, but his general condition of health became so deteriorated that he succumbed rapidly. The second dog, a puppy, also died promptly with well-marked

trophic troubles. The third, aged three years, inoculated six months ago, is still alive, and presents all the symptoms of saltatory chorea identical with those found in the animal to whom he owes the disease. In this third dog there have also developed trophic changes of the nails and the skin, and a general muscular atrophy. His general condition is extremely grave. In the course of the discussion M. Nocard emphasised the importance of the fact that the dog rendered artificially choreic was an adult, seeing that in the puppy trophic and atrophic troubles with choreic movements were not unfrequently observed in distemper. These results seem to contradict the mechanical embolic theory of Kirkes and Hughlings Jackson; but it is not improbable that they will both be in time explicable on the microbian theory.

The Blood corpuscles as a Source of Animal Heat.

We are taught in text-books of physiology that the muscular system, the glands and the brain, are, in their relative order of importance, the chief sources of animal heat. Too little account has perhaps been taken of the thermogenic *rôle* played by the blood corpuscles. M. Mosso of Turin has recently communicated to the Société de Biologie the results of some experiments which appear to him to prove that the coloured elements of the blood are not entirely inactive in the maintenance of the standard of bodily heat. This observer, having previously curarised a dog, practised artificial respiration with hydrogen gas, so as to deprive the blood of any trace of carbonic acid. Sensitive thermometers were then inserted, on the one hand into the carotid artery, and on the other into different viscera of the animal; and it was noticed that directly artificial respiration with ordinary atmospheric air was commenced the mercury of the instrument placed in the carotid suddenly rose, while the column in the other instrument remained stationary. I must leave it to the experts to appreciate at their proper value these experiments, which we owe to a veteran who has worked for many years at the problem of the vascular mechanism.

French Surgical Congress.

The sixth session of this Congress was inaugurated last Monday morning in the great amphitheatre of the Faculty of Medicine. The room was decorated with the flags of different nations, and the blending of the colours of France, Russia, England, and other countries, once more proved that medical science is oblivious of artificial distinctions that unfortunately play such a large part in affairs mundane. The opening meeting was presided over by Professor Demons of the Bordeaux Faculty, the other gentlemen on the platform being Professor Lannelongue (Vice-President), M. Pozzi, the indefatigable secretary, and M Picqué, his lieutenant. Several papers were read by MM. Boiffin of Nantes, Masse of Bordeaux, Charvot of Paris, Routier of Paris, Auffret of Brest, Gross of Nancy, Villar of Bordeaux, Moty of Paris, Mony and Calot, on various subjects of surgical interest. A very full programme has been drawn up for the whole of this week, and visits have been arranged for to the great hospitals of the metropolis, where operations by such authorities as Verneuil, Terrier, Reclus, Bouilly, Nicaise, Guyon, Péan, Lannelongue, Lucas-Championnière, and others, will be performed. To-morrow, at 4 P.M., a visit will be made to the Institut Pasteur, and on Sunday operations will be witnessed at the Veterinary School of Alfort.

The Medical Profession in Japan.

From statistics recently communicated to the Comité d'Hygiène Publique by Professor Proust, we learn that that go-ahead country Japan boasts 38,620 practitioners of medicine. This, with a population of 40,000,000, gives one professor of the healing art to 1035 inhabitants. Unfortunately, 29,105 of these gentlemen are not provided with a diploma, and of the others, many possess qualifications which would hardly command confidence in European countries.

Hydrophobia and Muzzling.

Acting in conformity with a resolution passed by the Sanitary Council of the Department of the Seine, the Prefect of Police "invites" all owners of dogs who indulge in a walk in the public streets with their pets to either lead them by a string or to muzzle them. All stray dogs are to be secured and conducted to the pound, like our dear old friend Mr. Pickwick, of convivial renown.

Paris, April 20th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Measles Bacillus.

DRS. CANON AND PIELICKE of the Moabit Hospital here have discovered in the blood of measles patients a bacillus which they regard as the germ of that disease. They made this bacillus visible by staining preparations of blood with a solution of eosine-methylene blue. No other solution proved efficacious. When treated with the said solution the bacillus appears blue. Sometimes all parts are equally stained, sometimes only the edges of the middle part, and often the middle part is paler than the ends. The diameter of the bacillus is about equal to that of a red blood-corpuscle—but often much smaller. The component parts are frequently oblong, so that the bacillus looks double, or as if severed in the middle. It is often slightly curved, especially in the blood of patients in whom the disease has run its course. The bacilli were generally arranged in groups of from eight to twenty. They were found to be present during the whole course of the disease, but were most numerous during defervescence. They were detected in the sputum also, and in the secretions of the pituitary mucous membrane and the conjunctiva. Drs. Canon and Pielicke inoculated drops of blood taken from measles patients on the usual nutritive media, and found that the bacilli in question developed only in bouillon. They declare that the bacilli differ essentially from the micro-organisms of measles hitherto described.

Scientific Congresses.

The German Public Health Society will hold its annual meeting from Sept. 8th to 11th at Würzburg, just before that of the naturalists and medical men, which will begin on Sept. 12th at Nuremberg. The management of business connected with the former of these two congresses is entrusted to Dr. Alexander Spiess of Frankfort-on-the-Main.

Tuberculin and Mallein as a Means of Diagnosis.

At the instance of the Government of Baden, numerous experiments have been made at Karlsruhe on cattle with a view of testing the diagnostic value of tuberculin. All the animals which reacted were slaughtered and found to be tuberculous, while those which did not react were also slaughtered and found to be free from tuberculosis. It appeared that a dose of at least four decigrammes was necessary in order to produce a reaction in diseased animals. Two Russian veterinary surgeons, Kalning of Riga (who fell a victim to his experiments), and Hallmann of Dorpat, have applied the principle on which tuberculin is produced, and obtained from cultivations of glanders bacilli a substance, called mallein, which produces a characteristic reaction in horses suffering from that disease but not in others.

Appointments &c.

Professor Rumpf of Marburg has been appointed to succeed Dr. Kast, now professor of clinical medicine at Breslau, as head of the Hamburg Infirmary. His scientific publications treat mostly of diseases of the nerves.

Professor von Hippel of Koenigsburg is reported to have accepted a call to succeed Graefe as Professor of Ophthalmology at Halle.

Dr. Theodor Schuchardt, the founder of a chemical factory of world-wide fame, died at Görlitz on the 15th inst.

At a recent meeting of the City Deputies Professor Virchow emphatically condemned the mixing of religious propagandism with sick nursing.

Berlin, April 18th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

An Exposition of Modern Methods of Nursing.

THERE is much interest in the movement to display an emergency ward at the Columbian Fair, illustrating all the novelties connected with the system of modern nursing. An organisation has been effected for that purpose among the women physicians and trained nurses of Chicago. The spirit of emulation is aroused by the statement that a leading feature of the exhibit to be made by the women of Great Britain would be a complete exposition of the methods

of nursing employed in England, and which have attracted so much attention. It is suggested that the friendly rivalry thus created between foreign methods employed here would lead to important improvements in the service.

Failure to Pass the Army Medical Examining Board.

At a recent meeting of the examining board of the Medical Department of the army only two applicants passed successfully in a list of twenty-four. This examination is very severe and exacting, but the percentage of failures is very large.

The Pan-American Medical Congress.

The progress made by the projectors of this new organisation is very encouraging. Twenty-six nationalities are to unite in the incorporation which has been effected, and the officers have been elected and the regulations governing the body adopted. The president is Dr. William Pepper of Philadelphia. It is provided in the regulations, among other things, that the membership hereafter shall consist of such members of the medical profession of the western hemisphere, including the West Indies and Hawaii, as shall comply with the special regulations regarding registration—viz., the payment of 10 dols. for members residing in the United States, but no fee by foreign members. There is to be an executive committee, consisting of one member for each constituent country. There are to be twenty-one sections, covering every branch of medicine, surgery and obstetrics, and all the specialties. The languages of the Congress are to be Spanish, French, Portuguese, and English. The officers of each section are an honorary chairman, an executive chairman, who shall organise the work of the section and deliver an inaugural address, one English and one Spanish-speaking secretary, and one secretary resident in each additional constituent country of the Congress. The first meeting of the Congress is to be held in the City of Washington on Sept. 5th, 1893. The organisation is now complete in British North America, the British West Indies, the Spanish West Indies, Guatemala, Nicaragua, United States of Colombia, Brazil, Uruguay, Venezuela, and the Argentine.

The Death of Dr. D. Hayes Agnew.

Dr. Agnew had attained the age of seventy-four, but he was still very actively engaged in professional work. His reputation and his age placed him at the head of the profession in this country. His most important work was his treatise on surgery in three large volumes, which illustrated his immense capacity for work, and the range of his knowledge of surgery. By the public his name will always be identified with the case of President Garfield, the treatment of whose gunshot wound he largely conducted. He left a legacy of 50,000 dollars to the hospital of the University of Pennsylvania, and 1000 dollars to the College of Physicians of Philadelphia.

Consular Officers in Russia required to report the Existence of Typhus Fever in their Districts.

The danger of the importation of typhus fever from Russia is so serious that the State Department has issued a circular to American consular officers in that country requiring immediate reports on the prevalence of typhus fever in their consular districts. When there is urgency the report must be by cable. By this means our Government will be constantly advised of the sanitary condition of the emigrant ports of Russia and of the condition of the emigrants who embark for this country. The frequent occurrence of cases of small-pox on steamships from Liverpool is explained by the consul at that port to be due to the constant existence of this disease in that city. On March 5th there were twenty-nine cases under treatment in hospital. The consul also states that in several instances recently he has at the request of steamship companies appointed a physician to examine parties of Russian Jews migrating to the United States, and to have their baggage thoroughly fumigated.

Tuberculin a Test of Tuberculosis of Cattle.

In a herd of choice Jersey cattle kept near Philadelphia one cow died, and on examination she was found to have had tuberculosis. A veterinary surgeon examined the herd, but could detect no evidences of the disease in the other cattle. But, as an aid in diagnosis, he employed tuberculin, and found reaction in six cases. These animals were slaughtered, and all but one were found to be suffering from tuberculosis. The exceptional case was not fully determined. These six cattle were believed to be in perfect health by experts who subjected them to a thorough examination. This herd had been selected with the greatest care, many of the animals being imported. Every precaution had been taken to preserve the health of the stock and to increase their constitutional vigour. In-breeding has never been practised, and the greatest care had been taken to secure good ventilation, the choicest food, plenty of exercise, and pure water. Experts regularly examined the herd and everything pertaining to their health. In this instance the value of tuberculin in diagnosis seems to have been fully demonstrated. This experience has excited great interest among health officers, as it proves that there is a simple method of determining the condition of the herds which supply milk to cities. A question of importance has been raised in this connexion—viz., as to the danger of using the milk of healthy cows that have been inoculated with tuberculin. The best authorities do not regard the milk in such cases as in the least affected.

New York, April 11th.

Obituary.

DR. D. HAYES AGNEW.

By the death of Dr. Hayes Agnew, Philadelphia has lost its foremost surgeon, and a man whose sterling character commanded the respect of all who knew him. He was born in 1818, his father being a well-known physician. After a careful preparatory education he took his medical curriculum at the University of Pennsylvania, and first of all practised in the country. But he soon moved to Philadelphia, and quickly became famous as a teacher of anatomy, attracting large classes to his lectures and demonstrations. With his zeal in anatomy he combined a great interest in pathology and morbid anatomy, and he founded the Pathological Museum of the Philadelphia Hospital. At about this time also he started the Philadelphia School of Operative Surgery. This work brought him very prominently before the profession, and his promotion and success were now rapidly attained. In 1854 he was appointed surgeon to the Philadelphia Hospital, in 1863 he was elected surgeon to the Wills Ophthalmic Hospital, and Demonstrator of Anatomy and Assistant Lecturer on Clinical Surgery at the University of Pennsylvania. In 1865 he was appointed surgeon to the Pennsylvania Hospital and to the Orthopædic Hospital; five years later he was chosen Professor of Operative Surgery in the University of Pennsylvania, and in 1871 Professor of Surgery and Clinical Surgery in that institution and in the University Hospital. He retired from these public posts a few years ago, and latterly had largely withdrawn even from private practice.

Dr. Agnew's transparent honesty of character and unhesitating devotion to his profession won for him the admiration of all who knew him, and the students who attended his classes were his enthusiastic admirers. Dr. Agnew had a very accurate knowledge of human anatomy, which he took pains to keep up, and he combined with this a sound and wide knowledge of morbid anatomy. He was ambidexterous in a marked degree, and by long practice, as well as by natural gift, became a very skilful operator. Naturally, a man of such parts was greatly sought after, and it was generally felt when he was summoned to attend the late President Garfield in his dying illness that a proper selection had been made. He enjoyed the confidence of the profession and of the public in an equal degree. He was a great worker, and has left behind him a monument of industry and learning in the form of a System of Surgery in three very large volumes. A second edition of this work was rather quickly called for, and Dr. Agnew had the satisfaction of knowing that the results of many years of patient toil were highly appreciated by the profession. He has died at the ripe age of seventy-four, full of years and full of honour.

THE QUINTON MEMORIAL FUND.—A meeting of the committee of this fund was held at Allahabad on the 14th ult. The finances showed a net credit balance of Rs. 10,432-9-7 in the Allahabad Bank, and the outstanding liabilities amounted to Rs. 925. After some discussion as to the disposal of the fund, and having regard to Mrs. Quinton's expressed wish that the memorial should take the form of a hospital, it was resolved (subject to certain specific conditions) to devote the fund towards the erection of a new ward for the Dufferin Hospital in Lucknow.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in subjects indicated at a recent meeting of the Examiners :—

Anatomy and Physiology.—Ernest Coleman, of Guy's Hospital; Wm. Hardcastle and Ernest H. Fricke, of Charing-cross Hospital; Francis J. Coutts, Alfred H. Gerrard, Thomas A. Starkey, and Joseph N. Brown, of University College; Nevill E. Thomas, of Middlesex Hospital; George G. Genge and Astley C. Swinhoe, of St. Thomas's Hospital; Thomas B. Bokenham and John S. Chater, of St. Bartholomew's Hospital; Harold S. Basden, of London Hospital; Oswin Shields, of St. Mary's Hospital; Victor J. Blake, of University College; David W. Wiseman, Charles W. Young, Walter E. Wyborn, and Edwin C. Montgomery, of Charing-cross Hospital; Garnet Soilleux, of Melbourne University; John Currie, G. A. Crace-Calvert, and Montague D. Eder, of St. Bartholomew's Hospital; Bertie J. Mayne, of Middlesex Hospital; Edward O. Thurston, of St. Thomas's Hospital; Graham N. Smith, Henry E. A. Horsford, and Paul C. E. Tribe, of King's College; Reginald L. Norman, of St. George's Hospital; E. H. Read, John A. Stainsby, and William Wilson, of London Hospital.

Anatomy only.—Lionel H. Y. Stephen and Edward Fisk, of Guy's Hospital; Algernon C. Bean, of University College; W. E. Adams, William P. Thomas, and John J. Spears, of London Hospital; Martin A. Cooke and Arthur H. Beadles, of St. Bartholomew's Hospital; Charles J. Barnes, of King's College and Mr. Cooke's School of Anatomy and Physiology; J. W. Stokes, of University College; John H. Wigham, of Yorkshire College, Leeds, and St. Mary's Hospital; Morris Wilks, of University College; William Gilbertson and Michael A. Teale, of St. Thomas's Hospital

Physiology only.—Willie N. Barron, of St. Bartholomew's Hospital; Francis A. Phillips, of St. George's Hospital; Sylvestre A. Francisco, of King's College; Arthur R. S. Freeland and Geo. A. T. Hayden, of London Hospital; William C. F. Hayward, of Charing-cross Hospital; Arthur A. Lewins, of McGill College, Montreal, and Mr. Cooke's School of Anatomy and Physiology.

Sixteen candidates were referred in both subjects; four in Anatomy only and seventeen in Physiology only.

UNIVERSITY OF EDINBURGH.—At the graduation ceremonial held on April 14th at the University the following degrees were conferred :—

Doctor of Medicine.—John Ardern Ashcroft, England, M.B., C.M., 1885; Charles Henry Bedford, England, M.B., C.M., 1887, B.Sc.

Doctor of Sciences.—Charles Henry Bedford, M.D., B.Sc.

Bachelor of Medicine and Master in Surgery.—Charles Frier, Frederick William Mackay, Frederick Linney Pochin, and George Richard Wilson, England; Alexander John Mackintosh, Scotland; Alex. Orford Schorn, India.

Bachelor of Science.—Charles Templeman, M.D.

UNIVERSITY OF ST. ANDREWS.—The following gentlemen, having passed the required examinations, had the degree of Doctor of Medicine conferred upon them on April 14th :—

Ashworth, J. H., M.R.C.P. Edin., F.F.P.S. Glasg., L.S.A., Halstead.
Barber, Oliver, M.R.C.S., L.S.A. Lond., Sheffield.
Fleetwood, Wm. John, L.R.C.P., L.R.C.S. Irel., Aintree, Liverpool.
Hardwicke, William Wright, M.R.C.P., L.R.C.S. Edin., Dovercourt.
Hyde, Samuel, M.R.C.S., Buxton.
Jennings, Robert, M.R.C.S., L.R.C.P. Lond., Haslingden.
Langston, Thomas, M.R.C.S., L.R.C.P. Edin., L.S.A., London.
Lee, Edward Samuel, M.R.C.S., L.S.A., London.
Rigden, Walter, M.R.C.S., L.S.A., London.
Smalles, Thomas, M.R.C.S., L.R.C.P. Edin., Honley, Huddersfield.

AT a Convocation held in Bishop Cosin's Hall, Durham, on March 15th, the following gentleman was admitted to the degree of M.D :—

Arthur Taylor Wear, M.R.C.S., L.R.C.P. Lond.

BARON HIRSCH (says *Truth*) has set an excellent example to wealthy sportsmen of all creeds and nationalities. He has decided to devote the whole of his turf winnings of last season, amounting in all to £7000, to hospitals and institutions of a kindred nature. The North-West London Hospital, Kentish Town, is to receive £1000, and University College, the London, and the West London Hospitals, and the Hospital for Sick Children, Great Ormond-street, will receive £700 each. Other institutions will benefit according to their needs and claims to support, without regard to religious or other distinctions.

FOOTBALL CASUALTIES.—In a match last week between the Keighley Shamrocks and Otley Shamrocks, at Highfield-lane, a player of the former team sustained a fracture of his left wrist. Whilst playing in a combination match on Wrexham racecourse, on Good Friday, a Gorton Villa forward was injured and removed to the Wrexham Infirmary, when it was found that he was suffering from concussion of the brain. During a game on Saturday at Handsworth, a young man, aged nineteen, received a blow in the abdomen and sustained "internal injuries." He was admitted to the General Hospital.

CENTENARIANS.—Thomas Jex, a master bricklayer, died at Wisbeach last week at the age of 104 years.—Mrs. Paulina Harris, who was born at Warsaw in 1790, died in Liverpool on the 10th inst. at the age of 102 years.

ROYAL INSTITUTION.—The Friday evening meetings will be resumed on April 29th, when Dr. Benjamin W. Richardson, F.R.S., will deliver a discourse on the Physiology of Dreams.

THE INFLUENZA EPIDEMIC.—Dr. W. J. Lush and Dr. J. P. Williams-Freeman, medical officers of the Andover Union, have each been voted a sum of £20 by the guardians, in addition to their salaries, as extra remuneration for the increase in their work resulting from the late epidemic of influenza.

NOTTINGHAM GENERAL HOSPITAL.—The annual report just issued for the past year shows that the daily average of patients in the wards was 144·4, which had exceeded that of any previous year since the hospital was founded; while it is satisfactory to notice that there was no proportionate increase in the domestic expenditure. Anæsthetics were administered in 515 cases. Through the convalescent fund thirty patients had been sent to convalescent homes. The adoption of a resolution two years ago that a delegate of the Hospital Saturday Committee should be selected to serve upon the board of management had been attended with very satisfactory results. The legacy of £500 bequeathed by the late Dr. Massey had been invested at his express desire. The hospital is indebted to the bankers in the sum of £979 2s.

THE ÆSCULAPIUS LODGE, NO. 2410.—The last meeting of this Lodge for the present Masonic year took place at the Café Royal, Regent-street, on Wednesday, the 13th inst. The Lodge having been opened, Bros. Montague Cheale, Frank Reid, Edward Stock Bell, and Clifford Luxmore Drew, M.B., barrister-at-law, were admitted to the third degree by the W.M. Bro. J. Brindley James. Bro. C. Montague Simpson, M.R.C.S., having been duly balloted for, was elected a joining member. Bro. Deputy Inspector-General Belgrave Ninnis, M.D., R.N., was unanimously elected W.M. elect for the ensuing year. Bro. G. Danford Thomas was also unanimously elected treasurer. The Lodge, having enjoyed a most successful year, was closed until October. The brethren afterwards partook of a banquet, spending an enjoyable social evening which produced some capital vocal talent.

DIPHTHERIA IN BROUGHTY FERRY.—The Sanitary Committee of the Broughty Ferry Police Commission have resolved to cause a general inspection of the drainage of the burgh to be made, and have instructed the sanitary inspector, along with the medical officer and surveyor, to do so. In the course of their examination the officials have been instructed to devote particular attention to the drainage of the schools. After the inspection a report on the subject will be prepared and laid before the Board. The idea of providing a cottage hospital has also been mooted, and will probably form a matter for consideration—a site in the neighbourhood of Barnhill being mentioned as suitable. Several additional cases of diphtheria are reported; one of a rather serious nature has occurred in Brook-street. There have been occasional outbreaks of the disease in the burgh for the past twelve months, the first having been reported in March last year.

NATIONAL HEALTH SOCIETY.—The general meeting of this Society took place on the 11th inst. in the Committee-room, 53, Berners-street. The secretary's report, which was read and formally adopted, showed the important national character of the Society's work, and how greatly it had increased during the past year. Amongst the most important of the Society's work was that undertaken under the auspices of the County Councils in sending into the various counties of England competent teachers to deliver series of practical "homely talks" to the working classes on nursing, cookery, and health, seven different counties having applied for such teaching. The courses in almost every case comprise a tour of twelve weeks consecutively, with an average of ten lectures per week. The county lecturers have been trained principally by the Society. Amongst the lectures organised for the students' instruction a course on Sanitation was kindly given by Dr. Thorne Thorne, medical officer of the Local Government Board.

GIFT TO DORSET COUNTY HOSPITAL.—Colonel Williams of Bridehead, near Dorchester, has presented £1000 to this institution in memory of his father, the late Mr. Robert Williams.

PRESENTATION.—Mr. Chas. Sims, L.D.S. R.C.S., on his retirement from the chair of Dental Surgery at Queen's College, Birmingham, has been presented with a gold watch by present and past students and his colleagues.

HER MAJESTY'S GOVERNMENT having increased to £60,000 the grant of £25,000 originally made for the purposes of the British Section at the Chicago Exhibition, the Royal Commission for that Exhibition is enabled to dispense with the revenue it was proposed to raise by charging the exhibitors in proportion to the extent of space occupied, and therefore all space in the British Section will now be granted free of charge.

METROPOLITAN OPEN SPACES.—At a recent meeting of the Metropolitan Public Gardens Association it was announced that a legacy of £100 had been left to the Association (the first legacy it had obtained during the nine years of its existence). With regard to the Hilly Fields scheme, S.E., negotiations were pending to add four acres of glebe land to the forty-one acres it was proposed to acquire. About £6000 were still required to make up the purchase money. Steps were to be taken to secure several other grounds for the public use. The Duke of Westminster has presented the Edgar Field, at Handbridge, Chester, for the recreation of the poor children of that suburb, together with £1000 for its endowment. The grounds were formally opened by the Mayor of the city on Monday last.

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.
A Treatise on the Parasites and Parasitic Diseases of the Domesticated Animals. By L. G. Neumann. Translated and edited by George Fleming, C.B., LL.D., F.R.C.V.S. Illustrated. 1892. pp. 800. Price 25s.
Colotomy—Inguinal, Lumbar, and Transverse. By Herbert W. Allingham, F.R.C.S. 1892. pp. 199. Price 6s.
How to feel the Pulse, and what to feel in it. By Wm. Ewart, M.D. Cantab., F.R.C.P. Illustrated. 1892. pp. 112. Price 3s. 6d.
A Manual of the Dental Laboratory. By Charles Hunter. 1892. pp. 171. Price 5s.

BATSFORD, B. J., High Holborn, London.
House Drainage. A Handbook for Architects and Building Inspectors. By G. A. T. Middleton. Illustrated. 1892. pp. 63.

CORNISH BROTHERS, Birmingham; and SIMPKIN, MARSHALL, & CO., London.
The Future Water-supply of Birmingham. By Thomas Barclay. Second Edition. 1892. pp. 48. Price 1s. net.

CHURCHILL, J. & A., New Burlington-street, London.
Materia Medica, Pharmacy, Pharmacology, and Therapeutics. By W. Hale White, M.D., F.R.C.P. 1892. pp. 614. Price 7s. 6d.
The Diseases of the Nervous System. By J. A. Ormerod, M.A., M.D. Oxon. 1892. pp. 328. Price 8s. 6d.

DORNAN, W. J., Philadelphia.
Transactions of the American Surgical Association. Vol. IX. Edited by J. Ewing Mears, M.D. 1891. pp. 508.

GREVEL & CO., King-street, Covent-garden, London.
My Water-Cure, tested for more than thirty-five years. By Sebastian Kneipp. Translated from his Thirty-sixth German Edition. Illustrated. 1892. pp. 395.

HIRSCHWALD, AUGUST, Berlin.
Grundriss der Klinischen Diagnostik. Von Dr. G. Klemperer. Dritte vermehrte Auflage. 1892. pp. 226.
Anleitende Vorlesungen für den Operations-Cursus. Von Prof. E. von Bergmann und Dr. H. Rochs. Zweite erweiterte Auflage. 1892. pp. 256.

LAND ROLL OFFICE, Lincoln's-inn-fields, London.
Land; its Attractions and Riches. By Fifty-seven Writers. Edited by C. F. Dowsett, F.S.I. 1892. pp. 910. Price 27s. 6d.

LIPPINCOTT COMPANY, Philadelphia.
The Diseases of the Mouth in Children (non-surgical). By F. Forchheimer, M.D. 1892. pp. 199.
The Complete Medical Pocket Formulary and Physician's Vade-Mecum. By J. C. Wilson, A.M., M.D. 1892.

LONGMANS, GREEN, & CO., London.
Elements of Materia Medica and Therapeutics. By C. E. Armand Semple, M.B. Cantab., M.R.C.P. Lond. Illustrated. 1892. pp. 480. Price 10s. 6d.

NEW SYDENHAM SOCIETY, London.
Lectures on Diseases of the Stomach. By Dr. C. A. Ewald. Translated from the latest German Edition, by Robt. Saundby, M.D. Edin., F.R.C.P. Lond. Vol. II. 1892.

OBSTETRICAL SOCIETY, Hanover-square, London.
Transactions of the Obstetrical Society of London. Vol. XXXIII., for the year 1891. Part 4. Price 4s.

RAITHBY, LAWRENCE, & Co., Ludgate-circus, London.
Obstetric Hints for the use of Midwives. By R. J. M. Coffin, F.R.C.P. Edin. Second Edition. 1892. pp. 80.

RENSHAW, HENRY, 356, Strand, London.
Stray Notes on Hygiene and on Influence. By a Member of the Old School of Medicine, M.D. Erlangen Univ. 1892. pp. 69. Price 1s.

SAUNDERS, W. B., Walnut-street, Philadelphia.
Essentials of Physics. Arranged in the form of Questions and Answers; prepared especially for Students of Medicine. By F. J. Brockway, M.D. Illustrated. 1892. pp. 330.
Essentials of Bacteriology. By M. V. Ball, M.D. Illustrated. 1891. pp. 159.
Essentials of Medical Electricity. By D. D. Stewart, M.D., and E. S. Lawrance, M.D. Illustrated. 1892. pp. 158.

SMITH, ELDER, & Co., Waterloo-place, London.
A Junior Course of Practical Zoology. By A. Milnes Marshall, M.D., D.Sc., M.A., F.R.S.; assisted by C. Herbert Hurst, Ph.D. Third Edition. 1892. pp. 478.

STANFORD, EDWD., Cockspur-street, Charing-cross, London.
Epidemics, Plagues, and Fevers; their Causes and Prevention. By the Hon. Rollo Russell. 1892. pp. 508.

THE F. A. DAVIS CO., Philadelphia and London.
The Mediterranean Shores of America, Southern California: its Climate, Physical and Meteorological Conditions. By P. C. Remondino, M.D. Illustrated. 1892. pp. 160. Price 6s. 6d.

THOM & CO., Dublin; and LONGMANS, GREEN, & CO., London.
Royal University of Ireland: Examination Papers, 1891. A Supplement to the University Calendar for the year 1892. pp. 113.

WHITTAKER & Co., White Hart-street, Paternoster-square, London.
The Drainage of Habitable Buildings. By W. Lee Beardmore. 1892. pp. 89.

Experimentelle und Pathologischanatomische Untersuchungen über Croup und Diphtherie; von Dr. K. Middeldorpf und Dr. E. E. Goldmann (Gustav Fischer, Jena, 1891).—Chirurgische Technik: Ergänzungsband zum Handbuch der Kriegs-hirurgischen Technik enthaltend die übrigen Operationen; von Dr. Fr. von Esmarch und Dr. E. Kowalzig (Dulau & Co., London, und Lipsius & Fischer, Kiel und Leipzig, 1892).—Handbuch der Physiologischen Optik; von H. von Helmholtz; sechste Lieferung (L. Voss, Hamburg und Leipzig, 1892).—Index Medicus: Authors and Subjects; Index to Vol. XIII.: January—December, 1891 (G. S. Davis, Boston, Mass.; and Kegan Paul, Trench, & Co., London) —Wie behütet man seine Kinder vor Tuberkulosen Drüsen- und Gelenkerkrankungen, vor Diphtherie und Gliederverkrümmungen? Was kann man gegen die Entstehung der Blutvergiftung, des Krebses und der Unterleibsbrüche thun? Von Dr. Karl Roser (J. F. Bergmann, Wiesbaden, 1892).—Anglais et Nihilistes Alliés. Révélations dédiées à la Jeunesse Russe; par P. Denisow (Imprimerie Indépendante, Genève, 1892).—The Nursing Directory for 1892; first annual issue ("Record" Press, Limited, Strand, London); price 5s.—Annales de Gynécologie et d'Obstétrique; Tome XXXVII., Avril, 1892 (G. Steinheil, Paris).—Archives of Pediatrics; edited by W. P. Watson, A.M., M.D.; Vol. IX., April, 1892 (Fairchild and Company, New York; and H. K. Lewis, London).—Archives of Surgery; Vol. III., No. 12, April, 1892 (J. & A. Churchill, London); price 2s. 6d.—Revue des Sciences Médicales en France et à l'Étranger; No. 78, Avril, 1892 (G. Masson, Paris).—Two Cases of Hernia, both treated by Laparotomy; by W. W. Keen, M.D., Jefferson Medical College, Philadelphia (reprint from the International Medical Magazine, February, 1892).—Nephrotomy for Calculus Pyelitis; by W. W. Keen, M.D., and D. D. Stewart, M.D. (G. S. Davis, Detroit, Mich., 1892).—Amputation at the Hip-Joint by Wyeth's method, the patient being five months pregnant; by W. W. Keen, M.D. (Lea Brothers & Co., Philadelphia, 1892).—Brain; by A. de Watteville; Part LVII., Spring Number, 1892 (Macmillan & Co., London); price 3s. 6d.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BAIN, JAMES G., M.B., C.M., has been appointed House Surgeon to the Taunton and Somerset Hospital, vice B. W. Housman, resigned.
BARRS, A. G., M.D. Edin., M.R.C.P. Lond., has been appointed Physician to the General Infirmary at Leeds.
BROWN, O. P., M.R.C.S., has been reappointed Medical Officer of Health for the Knighton Sanitary District of the Knighton Union.
CANT, WM. JOHN, M.R.C.S., L.R.C.P., L.S.A., has been appointed Honorary Consulting Surgeon to the Lincoln General Dispensary.
COTTERELL, EDWARD, L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon to the Out-patients, London Lock Hospital.
CLEMONS, GEORGE E., M.B., C.M. Edin., has been appointed House Surgeon to the Infirmary for Children, Liverpool.
DAVIES, SIDNEY, M.D. Oxon, M.R.C.S., has been reappointed Medical Officer of Health for Plumstead, Kent.
DEANE, E., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Blakesley Sanitary District of the Towcester Union.
DONOVAN, P. H., M.B., B.Ch. Irel., has been appointed Medical Officer for the Dispensary District of Edgeworthstown and Street, Longford.
GIBSON, C. G., M.B., C.M. Edin., has been appointed Medical Officer of Health for the Rural Sanitary District of the Launceston Union, vice Lunn, resigned.
GIBSON, JAMES, M.B., C.M., L.F.P.S. Glasg., L.M., has been appointed Medical Officer of Health for the Burgh of Doune.
HAMILTON-WHITEFORD, C., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the South Devon and East Cornwall Hospital, Plymouth.

HARPER, H. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Stow Rural Sanitary District of the Stow Union, vice Smith.

HERSCHELL, GEORGE, M.D. Lond., M.R.C.S., has been appointed Physician to the National Hospital for Diseases of the Heart, Soho-square, London.

JACOB, ERNEST H., M.A., M.D. Oxon., has been appointed Physician to the General Infirmary at Leeds.

JOHNSTON, J. MC C., M.B., C.M. Glasg., has been appointed Medical Officer by the City of Glasgow Parochial Board.

LANE, J. ERNEST, F.R.C.S., has been appointed Surgeon to the In-patients, London Lock Hospital.

LAZENBY, F. H., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Sanitary District of the Clitheroe Union.

MARSH, F., F.R.C.S., has been appointed Assistant Surgeon to the Birmingham and Midland Ear and Throat Hospital.

MASON, GEORGE A., M.A., M.B., B.C. Cantab., has been appointed House Physician to the City of London Hospital for Diseases of the Chest, Victoria-park.

MORT, HERBERT BROWNLOW, L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Physician to the Governesses' Home, Southport, vice Wm. Mort, M.D., resigned.

MULVANY, JOHN, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Cottage Hospital, Walsall, vice Kenneth W. Poole, resigned.

NETTLE, WM., M.R.C.S., has been appointed Medical Officer of Health for the Liskeard Urban Sanitary District of the Liskeard Union, vice Hingston, resigned.

RUDD, C. F., M.R.C.S., has been appointed Medical Officer for the Teignmouth Sanitary District of the Newton Abbott Union.

SAMUELSON, GERALD S., M.B. Edin., has been appointed Medical Officer to the Gundagai District Hospital, N.S.W.

SHARP, P., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Broughton Sanitary District of the Newark Union.

SMYTH, R. V. B., M.D. Dub., B.Ch., L.M.R.C.P. Irel., has been appointed Medical Officer for the South Mims Court Cecil, Marquis of Salisbury, A.O.F.

STREATFIELD, PERCY WM., L.R.C.P. Lond., M.R.C.S.E., has been appointed Medical Officer for the Sixth District, and Public Vaccinator for the Sixth and Seventh Districts of the Tunbridge Union.

WARNER, E. H., M.D., C.M. Edin., has been appointed Medical Officer for the St. Philip's South Sanitary District of the Barton Regis Union,

WILLIAMSON, CHAS. F., M.R.C.S., L.R.C.P. Lond., L.S.A., has been appointed Medical Officer and Public Vaccinator for the Third District of the Reigate Union, vice Jas. W. G. Farwell, deceased.

YUILL, JOHN L., M.B., C.M. Glasg., has been appointed House Surgeon to the Monkwearmouth and Southwick Hospital, Sunderland.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

ALTON UNION.—Medical Officer and Public Vaccinator. Salary as Medical Officer £110 per annum, with the usual extra fees. The Public Vaccinator is paid by fees of 2s. for each case at his residence, and 3s. for each case at the out stations. (Apply to Mr. M. H. Moss, Alton, Hants).

BOOTLE BOROUGH HOSPITAL, Bootle, near Liverpool.—Assistant House Surgeon and Dispenser. Salary £40 per annum, with board, lodging, and washing.

BOROUGH OF LEICESTER.—Medical Officer of Health for the Borough. Total salary £500 per annum (£400 as Medical Officer of Health and Superintendent of Fever Hospital, and £100 as Public Analyst). (Apply to the Town Clerk, Town Hall, Leicester.)

BRIGHTON THROAT AND EAR HOSPITAL, 23, Queen's-road, Brighton.—Non-Resident House Surgeon. Salary at the rate of £50 per annum.

CHARING-CROSS HOSPITAL, London.—Surgical Registrar. Salary £40 per annum.

CHARING-CROSS HOSPITAL MEDICAL SCHOOL.—Lecturer on Biology.

CLAYTON HOSPITAL AND WAKEFIELD DISPENSARY.—Junior House Surgeon. Honorarium £25 per annum, with board, lodging, and washing.

GENERAL HOSPITAL, BIRMINGHAM.—Honorary Physician.

GENERAL HOSPITAL, Nottingham.—Assistant House Physician for six months. Board, lodging, and washing in the hospital provided.

HOLBEACH UNION.—Medical Officer for Tydd Medical District. Salary £21 per annum, and fees for surgical and midwifery operations.

HOLLOWAY AND NORTH ISLINGTON DISPENSARY.—Resident Medical Officer. Salary commencing at £120 per annum, with unfurnished house, gas, and coals. £20 allowed for servant. (Address Honorary Secretary, 68, Aldermanbury, E.C.)

KING'S COLLEGE, London.—Curator of the Museum.

LIVERPOOL DISPENSARIES.—Assistant Surgeon. Salary £80 per annum, with board and residence. (Apply to the Secretary, Leith Offices, 34, Moorfields, Liverpool.)

MAIDA VALE AND ST. JOHN'S WOOD DISPENSARY.—Vacancy in the Honorary Medical Staff.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST AND THROAT.—Resident Medical Officer, at Bowden, Cheshire. Salary £60 per annum, with board, apartments, and washing.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer for six months. Salary £50.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Assistant Resident Medical Officer for six months.

PARISH OF ST. MARY, ISLINGTON.—Medical Officer for the Third (A) District. Salary £85 per annum, with such extra medical fees as defined by the Orders of the Local Government Board. (Apply to the Clerk, Guardians' Offices, St. John's-road, Upper Holloway, N.)

PLYMOUTH BOROUGH ASYLUM, Blackadon, Ivybridge, Devon.—Assistant Medical Officer. Salary £125 per annum, with quarters, board, and washing.

ROTHERHAM HOSPITAL.—Assistant House Surgeon for six months. Rooms, commons (exclusive of alcoholic drinks), and washing will be provided in the hospital in lieu of salary.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester-square, W.C.—Honorary Assistant Medical Officer for Casualty work to the Convalescent Branch, "Bellgarth," Temple Fortune, Finchley-road, N.W.

SUSSEX COUNTY HOSPITAL, Brighton.—Assistant House Surgeon. Salary not exceeding £30 per annum, and board and residence in the hospital.

WEST NORFOLK AND LYNN HOSPITAL, King's Lynn.—House Surgeon and Secretary. Salary £80 per annum, rising to £100. Board, lodging, and washing in the hospital.

WESTERN GENERAL DISPENSARY, Marylebone-road, N.W.—Senior House Surgeon. Salary £70 per annum, with board and apartments.

Births, Marriages, and Deaths.

BIRTHS.

BARCROFT.—On April 15th, at Amesbury, Wilts, the wife of Penrose John Barcroft, F.R.C.S.I., of a son.

BLOOD.—On April 11th, at Devonshire-road, Birkenhead, the wife of Surgeon-Major J. Blood, Bengal Medical Service (half-pay), of a daughter.

BRADSHAW.—On April 15th, at Clarence House, Everton-road, Liverpool, the wife of J. C. Bradshaw, L.R.C.P., &c., of a daughter.

BUNTING.—On April 12th, at Edensor, Southsea, the wife of R. O. Bunting, Surgeon and L.D.S., of a daughter (Dorothy Elsie).

GODDARD.—On April 7th, at Wembley, Harrow, the wife of Charles E. Goddard, L.R.C.P. Lond., M.R.C.S., of a daughter.

HARDYMAN.—On April 18th, at 43, Great Pulteney-street, Bath, the wife of George Hardyman, M.B., of a daughter.

MORTIMER.—On April 18th, at Horley, Surrey, the wife of J. D. Mortimer, M.B., F.R.C.S., of a daughter.

RELTON.—On April 15th, at Rugby, the wife of Bernard Relton, M.R.C.S., of a son.

VERNON.—On April 15th, at Drayton, Christchurch-road, Boscombe, Bournemouth, the wife of A. Heygate Vernon, F.R.C.S., of a son.

WELSH.—On April 17th, at Biggleswade, Beds., the wife of Dr. R. C. Welsh, of a daughter.

WHITCOMBE.—On April 8th, at Westerham, Kent, the wife of C. H. Whitcombe, F.R.C.S. Ed., of a daughter.

WILSON.—On April 12th, at Sparrows Herne, Bushey, Herts, the wife of Daniel Wilson, M.D., of a daughter.

MARRIAGES.

ABBOTT—ROBINSON.—On April 14th, at Bedford Chapel, Bloomsbury, W.C., by the Rev. S. A. Brooke, M.A., George Abbott, M.R.C.S., of the Pantiles, Tunbridge Wells, and 17, Upper Wimpole street, W., to Edith, eldest daughter of H. P. Robinson, Winwood, Tunbridge Wells.

BRIGGS—HALL.—On April 20th, at Prescot Parish Church, by the Rev. Harry Mitchell, Vicar, Henry Briggs, M.B., F.R.C.S. Eng., of 3, Rodney-street, Liverpool, to Annie Rosalie, eldest daughter of Egerton Francis Hall, M.D., The Ash Trees, Prescot.

BUTLER—TAYLOR.—On April 6th, at the Congregational Church, Peterhead, N.B., William Butler, M.B., C.M., Harlesden, London, to Isobel Anne, youngest daughter of W. L. Taylor.

GLASSINGTON—THOMAS.—On April 18th, at Holy Trinity, Brompton, Chas. W. Glassington, M.R.C.S., L.D.S., to Louisa Anna Catharina Thomas, elder daughter of the late Frederick Thomas, of Brompton-road.

KEAY—JOHNSTON.—On April 19th, at St. Thomas's Church, Stockport, John Keay, of Heaton Norris, Surgeon, to Edith, only daughter of John Watkins Johnston, of Stockport, Solicitor.

JOHNSTONE—FLEMING.—On April 6th, at Holy Trinity Church, Edinburgh, John Carlyle Johnstone, M.D., Melrose, to Catherine Annie, youngest daughter of Andrew Fleming, M.D., Deputy-Surgeon-General, Retired List, H.M. Indian Army (Bengal).

JOHNSTONE—HUDSON.—On April 18th, at the Church of St. Mary Abbot, Kensington, James Johnstone, B.A., M.B., C.M., F.R.C.S., son of the late Rev. Wm. Johnstone, M.A., Port Chalmers, New Zealand, to Rose Ethel, youngest daughter of W. L. Hudson, Esq., late of Manchester.

PARSONS—ALLAN.—On April 19th, at St. James's, Weybridge, Surrey, Dr. Frederic William Parsons, of Wimbledon, to Mary, fourth daughter of the late J. B. Allan, of Eddlewood, Weybridge.

RUSSELL—THORNBURY.—On April 19th, at Saint Jude's, Gray's-inn-road, by the Rev. W. D. Fanshawe, Vicar, William Fox Russell, M.B. &c., Holyhead, second son of John Russell, J.P., Glenview, co. Limerick, to Ethel Maria Thornbury, elder daughter of the late W. H. Thornbury, Natal, and granddaughter of the late Colonel Thornbury and Henry Collins, St. Bees.

DEATHS.

DODD.—On April 12th, at Westbourne-terrace-road, John Dodd, Esq., M.R.C.S., formerly of Portman-street, Portman-square, in his 89th year.

DUNN.—On April 17th, at the Torrs, Crich, Derbyshire, Christopher Blencowe Noble Dunn, M.R.C.S. Eng., eldest son of the Rev. Christopher Blencowe Dunn, of Howden, Yorkshire. Born August 23rd, 1836. Died April 17th (Easter Day), 1892.

WALKER.—On April 14th, at Spondon, near Derby, Benjamin Walker, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., aged 48 years.

N.B.—A fee of 2s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, April 25.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Tuesday, Wednesday, Friday, and Saturday at the same hour.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. J. Kent Spender (Bath): The Rarer Complications of Rheumatoid Arthritis.—Sir Dyce Duckworth: Infective Endocarditis of the Right Side of the Heart.

Tuesday, April 26.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Professor Bonney: The Sculpturing of Britain—its Later Stages. (The Tyndall Lectures.)

ROYAL STATISTICAL SOCIETY (Lecture Theatre, Museum of Practical Geology, 28, Jermyn-st., S.W.).—7.45 P.M. Mr. R. Henry Rew: An Inquiry into the Statistics of the Production and Consumption of Milk and Milk Products in Great Britain.

SOCIETY OF ARTS.—8 P.M. Sir Edward Braddon: Australasia—its Progress and Resources.

Wednesday, April 27.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.

CHARING-CROSS HOSTITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.

HUNTERIAN SOCIETY (London Institution).—8.30 P.M. Mr. Hope Grant (with Dr. Snell) will show a case of Hydatid Membranes passed by Urethra and Rectum from Spleen after Fifteen Years.—Mr. H. W. Denton Cardew: On the Electrical Treatment of Graves's Disease.—Mr. W. Lang: On the Treatment of some of the External Diseases of the Eye.

SOCIETY OF ARTS.—8 P.M. Professor Robert Wallace: Egyptian Agriculture.

Thursday, April 28.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

ROYAL INSTITUTION.—3 P.M. Professor Dewar: The Chemistry of Gases.

SOCIETY OF ARTS.—4.30 P.M. Sir William Wedderburn: Reorganisation of Agricultural Credit in India.

BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square).—8.30 P.M. Mr. John W. Taylor (Birmingham): Some cases of Ectopic Gestation.—Mr. Bowreman Jessett: Nephrotomy in a Woman with One Kidney (Specimen).

Friday, April 29.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—9 P.M. Dr. B. W. Richardson: The Physiology of Dreams.

Saturday, April 30.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

ROYAL INSTITUTION.—3 P.M. Mr. E. Dannreuther: J. S. Bach's Chamber Music (with many Musical Illustrations).

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 21st, 1892.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Apr. 15	29·79	W.	35	34	83	50	32		Foggy
,, 16	29·51	E.	37	36	66	45	34	·25	Snowing
,, 17	29·73	N.E.	43	39	75	47	33		Cloudy
,, 18	30·03	N.E.	30	36	87	52	34	·10	Bright
,, 19	30·35	N.E.	40	38	82	53	35	·05	Cloudy
,, 20	30·38	S.W.	46	43	80	53	39	..	Cloudy
,, 21	30·12	S.W.	53	52	95	62	45	·16	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

We cannot undertake to return MSS. not used.

ADVERTISING PRACTITIONERS.

WE direct the attention of the profession to the following advertisements, not that they may be imitated. They occur in an advertising sheet of Huddersfield, and they candidly appeal to the public as the other advertisers do. It is discouraging to see graduates of universities using such methods.

"*Notice.*—Dr. Milligan begs to intimate to his patients that Dr. James Laird has succeeded him in his Surgery at 29, St. Peter's-street. In future Dr. Milligan's hours for consultation at South Parade (Surgery Entrance, corner Manchester-road) will be—Morning 9–9.45; Afternoon 2.30–3.30; Evening 6–8."

"*Notice.*—Dr. J. Laird wishes to inform the public of Huddersfield and District that he has succeeded to the practice till lately carried on by Dr. Milligan, at 29, St. Peter's-st. Dr. Laird's consultation hours will be—Morning 10–11; Evening 6–8; Sunday Evening 8–9. Dr. Milligan carries on his practice as usual at South Parade."

Mr. G. M. Polsue.—The important case referred to by our correspondent has already been noticed in our columns.

MEDICAL PRACTICE IN SOUTH CALIFORNIA.

To the Editors of THE LANCET.

SIRS,—Can you favour me with your advice as to how to get information regarding medical practice in South California? I am a young graduate, and I desire to make my home there in some growing health resort in a good farming part of the State. Where is reliable information regarding prospects, suitable openings, outfit, &c., to be obtained?

I remain, Sirs, yours faithfully,

April 19th, 1892. QUERCUS ILEX.

A PIN SWALLOWED AND DISCHARGED IN COUGHING.

DR. BOJASINSKI mentions in a Polish medical journal the case of a little boy of between three and four years of age who swallowed a pin, and for nearly half a year felt no inconvenience from it, excepting occasional and transitory attacks of vomiting. At the end of that time, however, he suffered from an attack of acute bronchitis, and in one of the fits of coughing and vomiting brought up the pin, which, on examination, proved to be so much affected by the acids of the stomach that the point broke off with a very slight amount of pressure.

INFLAMMABLE TONGUE DEPRESSORS.

WE learn from a correspondent that the proprietors of a certain beef essence are distributing gratis among the profession, as an advertisement, tongue depressors having the appearance of ivory, with the name of their preparation stamped on the handle. This instrument consists of the same material as the "inflammable buttons" lately referred to in THE LANCET, and might prove a dangerous aid to operation, especially in applying the actual or galvanic cautery to the throat or mouth. When touched with a glowing coal it instantly ignites and burns with a fierce flame leaving almost no ash.

Alpha.—The answer to the first question is in the negative. Answers to the various questions regarding the incidence of postage under the Infectious Diseases (Notification) Act appeared in THE LANCET of March 26th, page 713.

SCHOOL INFIRMARIES AND SANATORIA.

To the Editors of THE LANCET.

SIRS,—Can you tell me whether, as regards public schools, there is any fixed percentage of room for sick boys as compared with the total number of scholars? In some schools of which I am medical officer there are 100 boys, and only room for ten when ill. Fever or diphtheria cases are at once removed to the London Fever Hospital. My contention is that it is not enough. With an outbreak of measles, for instance, out of 100 boys there would surely be more than ten ill at once. The sick rooms are not detached from the main building. Do you think the amount of room is sufficient? Or, rather, ought there not to be accommodation for at least twenty boys? There are also four masters living on the premises, and one or more of these might be ill. I should very much like to know whether there is any customary amount of accommodation for the sick.—I am, Sirs, yours truly,

April 18th, 1892. W. G. G.

*** Our correspondent should obtain a copy of the pamphlet entitled "The Construction and Maintenance of School Infirmaries and Sanatoria," edited by Dr. Sheely and Dr. H. Alder-Smith, and published by Messrs. Churchill. The pamphlet is prepared by the Council of the Medical Officers of Schools Association. For the information of those of our readers who may be situated similarly to our correspondent we may add that the accommodation would be influenced by the ages and social status of the boys and other considerations. According to the pamphlet, 20 per cent. of accommodation ought to be provided for infectious diseases; but if that were done in large schools the sanatorium would in some cases be half as large as the school itself, which would be too costly. In the case of a large outbreak of measles or of influenza extra wards must be used. If fifty or sixty cases occurred in a large school, the spread of the epidemic could not be prevented, and hence ordinary wards could be utilised, or even a large iron building for an emergency. In a school of 100 boys there ought to be five beds at least for ordinary cases, and ten in a sanatorium, with another ten elsewhere in case of need. This is all that would be required for scarlet fever &c.; for if ten cases were to occur the school ought to be broken up. But in the case of measles twenty or thirty cases might be provided for. If masters have to be treated in the sanatorium, then more room would be required.—ED. L.

ARE THE PRESENT ROAD-LEVEL SEWER VENTILATORS EFFECTUAL?

To the Editors of THE LANCET.

SIRS,—I have before now gone into the question as to whether road-level ventilators are conducive to the public health; but there is another point of certainly equal importance which requires consideration, and that is as to their efficiency. Now, if anyone will take the trouble to inspect a series of these in any thoroughfare where there is a heavy vehicular traffic, he will find the greater part of the gratings completely filled with mud, and under these circumstances they can scarcely be said to be effectual in their operation. I would therefore say that both in point of safety and efficiency we have not yet arrived at the best method of ventilating our main sewers.

I am, Sirs, your obedient servant,

Surbiton, April, 1892. F. P. ATKINSON.

MADAME HENRI GREVILLE AND M. PASTEUR.

MADAME GREVILLE is well known not only as one of the most brilliant of French novelists, but also as an acute observer of the manners and customs of the people among whom she has journeyed and sojourned. M. Pasteur has in a letter given public expression to his indebtedness to her for her description of the *modus operandi* of the Muscovites in cases of hydrophobia. She had watched their treatment of such cases—immersion of the patient in a vapour bath raised to the highest possible temperature. The success of this seemingly desperate remedy was such as to cause her to bring it under the notice of M Pasteur long before he entered on his special studies in hydrophobia—studies in which Madame Greville's experiences, as he acknowledges, quickened his interest.

FRENCH PRISONS AND THEIR SANITATION.

DOCUMENTS lately made *publici juris* give a sombre picture of life in the prisons—especially the Parisian prisons—of France. It is only of late years that these institutions have been specially built for their purpose, the general rule having been to "adapt" some old edifice—sometimes a convent, sometimes an almshouse—for the reception of convicts. Take, for instance, the St. Pélagie, next to the Conciergerie the oldest prison in Paris. A convent in 1665, it was long a debtor's prison, and is now used as a penitentiary for those whose detention does not exceed twelve months. The besetting fault of French prisons—overcrowding—is seen at its worst in such a building, constructed on seventeenth-century lines, in defiance of what is now known as hygienic science, and, as a result, saturated to its very basement with fever germs. Disinfection, practised from time to time, remains powerless to reduce the prevalence of typhoid fever within its walls, no other prison in France—a large order!—contributing more inmates to the infirmary. Its 700 prisoners are distributed over eighty cells, from five to ten beds being the average in each dormitory. The young and comparatively innocent convict is thrown into closest contact with the inveterate jail-bird, by whom he is initiated in crime, and comes out an accomplished thief or burglar—a fact which explains the appalling return showing that, in 1889, out of 26,000 malefactors more than 16,600 were below twenty years of age. The solitary confinement practised in the great model prison of Paris, the Mazas, has been followed by evils which, in the case of a mercurial people like the French, are so pronounced as to engage the serious consideration of prison reformers. So terrible is the seclusion, so hopeless all chance of escape, that, rather than get committed to the Mazas, the French criminal classes endeavour, by aggravation of their offences, to incur the nominally more severe, but in their eyes more tolerable, punishment of transportation to New Caledonia, with its open-air life and its companionship, to say nothing of the possibility of giving the warders the slip. Detention in the Mazas is sooner or later followed by suicide among a vast proportion of its inmates, insomuch that one entire section of it is specially organised for those whose proclivities to self-murder are suspected. The Dépôt de Mendicité at St. Denis was lately destroyed, not a moment too soon, and replaced by another building less in the nature of a fever preserve. For forty-seven years the Dépôt had existed over a sewer of the old-fashioned type, which exhaled its effluvia among the overcrowded inmates.

L.S.A.Lond. & Dub. will see that we have not overlooked the question which he raises.

SPRAY PRODUCERS WITH CHECK ACTION.

To the Editors of THE LANCET.

SIRS,—Will you allow me to explain the check action I have used for seventeen years? I hold the bottle in the left hand, and before using the bellows I get the tubing between my index finger (or middle) and thumb. When I want to moderate or stop the spray, I use pressure of my fingers to bring about the effect. No ingenuity, no novelty, and no instrumentality are all I claim for the above plan.

I am, Sirs, yours faithfully,

April 14th, 1892. POTESTAS.

TAXATION OF GAMBLING.

THE authorities of Paris, according to the *St. James's Gazette*, unable to prevent gambling, have hit on the plan of taxing gaming stakes for the benefit of the Assistance Publique. The result is that a considerable sum has just been applied to the purpose of constructing a new consumption hospital, and a further amount partly to like institutions and partly to the furtherance of the revaccination campaign under the auspices of the Paris Academy of Medicine.

Viator.—It is both customary and reasonable to make an extra charge when more than one member of a family is seen.

"MICROSCOPICAL WORK."

WE have received several communications from gentlemen offering their services in the direction indicated by "M.R.C.S." in his letter of last week, under the above heading. It is obvious that we cannot publish them, as they would necessarily savour of the nature of advertisements. Perhaps our correspondent will furnish us with an address at which these gentlemen may communicate with him.

Anxious.—We must refer our correspondent to the Students' Number of THE LANCET, published on Sept. 6th last.

SURGEON-CAPTAIN G. E. HALE, D.S.O.

THE name of the officer of the Medical Staff on whom the Distinguished Service Order has been conferred for his gallant services in the field operations in Burmah is Surgeon-Captain G. E. *Hale* (not "Hare," as was erroneously printed in our annotation last week).

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Althaus, London; Mr. Adkins, Paignton; Mr. Attwood, London; Mr. E. A. Atkinson; Dr. F. P. Atkinson, Surbiton; Messrs. Arnold and Son, Surbiton; Dr. H. T. H. Bishop, Portsmouth; Messrs. W. J. Bush and Co., London; Dr. Boobbyer, Nottingham; Messrs. Barker and Son, London; Mr. T. B. Browne, London; Messrs. Burroughs and Wellcome, London; Mr. E. C. Bousfield, London; Messrs. Blondeau et Cie., London; Mr. Birchall, Liverpool; Messrs. Bates, Hendy, and Co., London; M. Berthier, Paris; Mr. B. Basket, Belsize-park; Mr. J. Carroll, Ilkeston; Mr. Chavasse, Birmingham; Mr. Cruthers, South Norwood; Mr. Cheatle, London; Mr. H. S. Clarke; Messrs. Christy and Co., London; Mr. Crumbie, York; Mr. Chapman, Stamford; Dr. Dulles, Philadelphia; Dr. T. Dutton, London; Dr. Davies, Sierra Leone; Mr. Davey, London; Mr. Davis, London; Dr. Drage, Hatfield; Sir Joseph Fayrer; Dr. Felkin, Edinburgh; Messrs. Ferris and Co., Bristol; Mr. Rogers Field, London; Dr. Garner, Preston; Mr. Galt, Stewarton; Dr. Hardman; Mr. Hawkins, Paris; Mr. Harris, London; Dr. Hime, Bradford; Mr. Hornibrook, London; Mr. Hunt, Manchester; Mr. Hannah, Wakefield; Mr. Jessett, London; Mr. W. Kimpton, London; Dr. R. Lee, London; Dr. Lush, Andover; Dr. H. Lawton, Poole; Mr. A. Lane, London; Messrs. Longmans, Green, and Co., London; Mr. W. Arbuthnot Lane; Brigade Surgeon Lieut.-Col. K. McLeod, Calcutta; M. Mygand, Denmark; Messrs. Macfarlan and Co., London; Mr. Middendorp, Groningen; Messrs. Moss and Jameson, London; Mr. W. Martindale, London; Dr. J. A. MacMunn, Alderney; Mr. Charles H. McIlraith, London; Dr. MacPherson, Stirling; Dr. P. J. O'Brien, Cork; Mr. Pryce, Sidmouth; Dr. Pye Smith, London; Mr. E. Pooley, Lancashire; Dr. F. S. Palmer, East Sheen; Mr. Paine, Worthing; Mr. Rowlands, Stockport; Mr. Rees, Shropshire; Dr. T. Somerville-Smith, Sittingbourne; Mr. F. Ross Sergeant, Nottingham; Mr. Stansfeld, Leeds; Messrs. W. H. Smith and Son, London; Dr. J. Smith, Manchester; Messrs. E. Smith and Co., London; Dr. Skrimshire, Holt; Mr. A. M. Sheild; Mr. Henry Smith, London; Dr. H. R. Spencer, London; Dr. W. D. Scott, Watford; Dr. Turner, Paris; Mr. Tabb, Montreal; Mr. Trimble, West Bromwich; Mr. H. Neville Taylor, Cambridge; Dr. Bezly Thorne, London; Mr. Vickers, London; Messrs. Ventom, Bull, and Cooper, London; Dr. A. T. Wear, Newcastle; Messrs. Whitworth and Stuart, Manchester; Dr. Ward, Oxford; Dr. Zangger, Switzerland; Alpha; G. B., Finchley; G. G., London; Medical Superintendent, Barnwood House, Glasgow; Secretary, General Hospital, Notts; Clerk, Allon Union; Midland, London; W. G. G.; S. S.; Secretary, Rotherham Hospital and Dispensary; Medico, Liverpool; Secretary, Hospital for Women, Wolverhampton; Chance, London; Secretary, West Norfolk Hospital; M.D., London; W. E. G.; S. H. H.; Assistant Honorary Surgeon, College of State Medicine; Potestas; North of England Clerical Agency, Manchester; Quercus Ilex; Secretary, Sussex County Hospital; S. T. E., London; W. W., London; Secretary, Brighton Throat Hospital; L.S.A. Lond. & Dub.; X. Y. Z.; Clerk, Holbeach Union; Practitioner, Birmingham; V. V., London; Anderson College Medical School, Glasgow.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Ashby, Manchester; Dr. J. W. Draper, Huddersfield; Dr. Harris, Birchington; Mr. Hannay, Glasmore; Mr. Russell, Holyhead; Mr. Heywood, Manchester; Mr. Fisk, Cambs.; Mr. Main, Newbury; Mr. Kegworth, Lincoln; Mr. Evans, Llanberis; Dr. Ormond, Natal; Miss Galloway, Glasgow; Mr. Jones, Glamorgan; Miss Foulds, Derby; Mr. Gibson, Tewkesbury; Mr. Branthwaite, Twickenham; Mr. Brodie, Wickham Market; Mr. Inglis, Glasgow; Mr. Wilson, Dublin; Messrs. Geachy and Co., Glasgow; Mr. Halford, sen., London; Mr. Thomas, South Wales; Dr. Owen, Doncaster; Mr. Deane, Towcester; Messrs. Battle and Co., Paris; Mr. James, Glamorganshire; Mr. Abbott, Tunbridge Wells; Mr. Lees, Macclesfield; Dr. Waterhouse; Mr. Ellis, Bishop Auckland; Mr. Patterson, Durham; Dr. Arundell; Dr. Bourke, Earl's Court; Dr. Sewart, Lostwithiel; Dr. Eastlands, Texas; Mr. Gilchrist, Inverkip; Mr. Irving, Blackburn; Mr. Moseley, Caterham; Mr. Tyte, Minchinhampton; Mr. Saunder, Manchester; Dr. Knott, Middlesbrough; Mr. Wilsden, Northumberland; Mr. Dixon, Northampton; Mr. Elliott, Manchester; Mr. Taylor, Birmingham; Mr. Humphreys, Montgomeryshire; Baroness von Roemer, Battle; Dr. Leckie, Pontypridd; Dr. Fowler, Coventry; Mr. Hustlen, Pembroke; Mr. Marquis, Glasgow; Dr. Lewis, Brynaman; Dr. Byrne, Cork; Mr. Young, Middlesbrough; Dr. Bauer, St. Louis; Dr. Sykes, Barnsley; Mr. Evans, New Quay; Dorothy; Qualified, London; Beta, London; Harris, Stroud Green; F. K., London; Howard, Manchester; A. G., London; Class Rooms, Edinburgh; Janion, London; Bradford, London; Troubled One; Medicus, Ramsgate; Medicus, Southampton; Medicus, Margate; Delta, Bristol; Sigma, London; W. M. S., London; Fidelis, London; A., Leeds; Confidence, London; M.D., London; H. T. M., Torquay; B. R. K. J., London; Landlord, Finsbury-park; A. B. C., London; T. H., Manchester; J. M. S., London; Medicus, London; Physician, Dublin; Vix, London; M.R.C.S., London; Owner, Bayswater; Medicus, Cardiff; Clavus, London; Alpha, London; Homo, Bridgwater; M., London; Galen, London; X. Y., London; Vendor, Birmingham; Strophanthus, London; J. L. A., Birmingham; Sic Olim, Leeds; H. B, Truro; Willis, Leicester; S. G.C., Blackheath.

NEWSPAPERS.—*Melbourne Argus, Cape Times, Observer (Adelaide), Glasgow Herald, Scotsman, Eastern Daily Press, Yorkshire Post, Hampstead Advertiser, Herts Observer, Norfolk Daily Standard, Scottish Leader, Surrey Advertiser, Birmingham Gazette, Guy's Hospital Gazette, Law Journal, Reading Mercury, Mansfield and North Notts Advertiser, Insurance Record, Mining Journal, Sanitary Record, Hertfordshire Mercury, Windsor and Eton Gazette, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, West Middlesex Advertiser, Windsor and Eton Express, Times of India, Pioneer Mail, Local Government Journal, North Star, Electrical Review, City Press, New Zealand Mail, North China Daily News, Irish Times, Blackburn Standard, Dartmouth Chronicle, Hertfordshire Express, Manchester Examiner, Citizen, North Wales Chronicle, Tasmanian Mail, Sussex News, Newcastle Daily Journal, Llandudno Advertiser, Bath Herald, Australian, Le Temps (Paris), Huddersfield Chronicle, Wrexham Advertiser, Radical Review, South Wales Daily News, Bournemouth Visitors' Directory, Liverpool Mercury, Nursing Record, Liverpool Courier, &c.*, have been received.

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Agent for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris.